CENTER FOR NUTRITION POLICY AND PROMOTION

Family Economics and Nutrition Review

Feature Articles

Research Summaries

Regular Items

UNITED STATES DEPARTMENT OF AGRICULTURE
Volume 9, Number 2
1996

Editorial Board

Family Economics and Nutrition Review is written and published each quarter by the Center for Nutrition Policy and Promotion, U.S. Department of Agriculture, Washington, DC.

The Secretary of Agriculture has determined that publication of this periodical is necessary in the transaction of the public business required by law of the Department.

Family Economics and Nutrition Review is indexed in the following databases: AGRICOLA, Ageline, Economic Literature Index, ERIC, Family Resources, PAIS, and Sociological Abstracts.

Family Economics and Nutrition Review is for sale by the Superintendent of Documents. Subscription price is $8.00 per year ($10.00 for foreign addresses). Send subscription orders and change of address to Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. (See subscription form on p. 52.)

Original manuscripts are accepted for publication (See "guidelines for authors" on p. 41). Suggestions or comments concerning this publication should be addressed to: Joan C. Courtless, Editor, *Family Economics and Nutrition Review*, Center for Nutrition Policy and Promotion, USDA, 1120 20th St., NW, Suite 200 North Lobby, Washington, DC 20036. Phone (202) 606-4816.

Feature Articles

Research Summaries

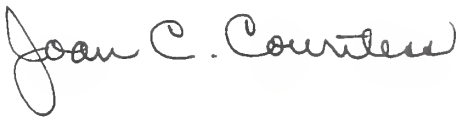
Regular Items

Volume 9, Number 2
1996

Special Theme Issue: Dietary Guidelines

From the editor

An abstract of the first two articles in this special theme issue related to the Dietary Guidelines was published—as a "commentary" from a policy perspective—in the March 1996 issue of the *Journal of the American Dietetic Association*. Additional information reported here includes the historical background of the guidelines and a more thorough explanation of the consumer research used in developing the fourth edition of the *Dietary Guidelines for Americans*. The third article summarizes the U.S. Department of Health and Human Services' publication, *Healthy People 2000 Midcourse Review and 1995 Revisions*. Among the objectives established for evaluating progress towards the Healthy People 2000 goals are several related to nutrition and Dietary Guidelines' concepts, which we believe will be of interest and will help our readers acquire a broader perspective on uses of the Dietary Guidelines in national policy development.



Information and a limited number of publications from the Center for Nutrition Policy and Promotion may be accessed electronically at the following locations:

CNPP Home Page at:
http://www.usda.gov/fcs/cnpp.html

Food and Consumer Service Bulletin Board at FedWorld:
By modem: Dial 703-321-3339
For Internet FTP services: ftp.fedworld.gov

The Dietary Guidelines for Americans—Past, Present, Future

By Carole A. Davis
Chief Nutritionist
Center for Nutrition Policy and Promotion

Etta A. Saltos
Nutritionist
Center for Nutrition Policy and Promotion

The Dietary Guidelines for Americans, and the process for their development are important to all people concerned about food, nutrition, and health policy and education. The information presented in the Dietary Guidelines consumer bulletin is the one voice with which the Federal Government speaks about what healthy Americans should eat to stay healthy and why. The Dietary Guidelines form the basis of Federal nutrition policy affecting food, nutrition education, and information programs. The use of the Dietary Guidelines assures that dietary advice coming from Federal sources is sound, up-to-date, and consistent.

Government nutritionists have been providing advice to Americans about what to eat for nearly a century. In looking at the contemporary Federal dietary recommendations from a historical perspective, it is apparent how far we have come in food guidance. Yet at the same time, it is surprising to see how much is, in fact, the same.

History of U.S. Department of Agriculture Food Guides

The use of the scientific process to develop dietary guidance began about 100 years ago at the U.S. Department of Agriculture (USDA) with W.O. Atwater, first director of the Office of Experiment Stations in USDA. He helped establish important data bases for the development of food guidance including dietary standards for protein, calories, and tables of food composition *(4)*.

In a Farmers' Bulletin published in 1902, Atwater emphasized the importance of **variety**, **proportionality**, and **moderation** in healthful eating *(5)*. He stated that, "for the great majority of people in good health, the ordinary food materials...make a fitting diet, and the main question is how to use them in the kinds and proportions fitted to the actual needs of the body." Many of our dietary guidance efforts have focused on answering this question.

The first USDA food guide, "Food for Young Children" by Caroline Hunt, a USDA nutritionist, appeared in 1916 *(9)*. It translated the emerging science of

nutrition into national dietary recommendations for consumers. The food guide, which specified five food groups, translated nutrient recommendations into recommendations for food intake.

As more was learned about vitamin and mineral requirements and food consumption patterns of the population, food guides emerged such as the "Basic Seven" (1946) and the "Basic Four" (1958) *(15,16)*. These guides focused on choosing enough of the kinds of foods to provide the nutrients needed for good health. These dietary recommendations outlined what was called a "foundation diet" or core of foods that would provide a major share of protein and the recommended vitamins and minerals known at the time these guides were developed. The "Basic Four"—milk, meat, vegetable and fruit, and bread and cereal—remained the centerpiece of nutrition education for the next two decades.

New Directions for Dietary Guidance

By the 1970's, there was a growing body of research relating overconsumption of certain dietary components—such as fat, saturated fat, cholesterol, and sodium—and the risk of some chronic diseases, such as heart disease and stroke.

A new direction for dietary guidance was set in 1977 with the release of the *Dietary Goals for the United States* by the U.S. Senate Select Committee on Nutrition and Human Needs, popularly known as the "McGovern Committee" *(28)*. The *Dietary Goals* shifted the focus from obtaining adequate amounts of vitamins and minerals to avoiding excessive intakes of food components that had been linked to chronic diseases. The Committee's report specified the amounts of protein, complex carbohydrates, sugars, fat, cholesterol, and salt that Americans should consume. It generated considerable discussion in the scientific community about the appropriateness and utility of the *Dietary Goals*. Because diets developed following these goals were so different from usual food patterns, USDA did not adopt the goals as the basis for its food plans and guides. However, they did draw attention to the need for guidance on diet and health.

In response to the *Dietary Goals*, the Department of Health and Human Services (HHS) asked the American Society for Clinical Nutrition (ASCN) to form a panel to study the relationships between dietary practices and health outcomes. The panel's findings were presented in a 1979 report entitled *Healthy People: the Surgeon General's Report on Health Promotion and Disease Prevention (23)*. The report suggested that people reduce their consumption of excess calories, fat and cholesterol, salt, and sugar to lower disease rates.

Also in 1979, USDA released a colorful booklet entitled *Food*, which presented the "Hassle-Free Guide to a Better Diet" *(18)*. This guide added a fifth food group to the "Basic Four"—the fats, sweets, and alcohol group. This food group separated foods that provided mainly calories with few other nutrients from the other four food groups. The guide highlighted the need to moderate the use of fat, sugars, and alcohol and gave special attention to cutting calories and getting adequate dietary fiber.

At about this same time, HHS and USDA began to develop a set of simple guidelines that would provide help for healthy people as they made daily food

By the 1970's, there was a growing body of research relating overconsumption of certain dietary components...and the risk of some chronic diseases, such as heart disease and stroke.

choices. Such guidelines, based in part on the 1979 *Surgeon General's Report on Health Promotion and Disease Prevention,* were published in 1980 as the first edition of *Nutrition and Your Health: Dietary Guidelines for Americans (19).*

The guidelines called for a diet of a variety of foods to provide essential nutrients and more starch and fiber while maintaining recommended body weight and moderating dietary constituents—fat, saturated fat, cholesterol, sugars, sodium, and alcohol—that might be risk factors in certain chronic diseases. These guidelines, even though they were directional rather than quantitative, were not totally acceptable to all nutrition scientists and health professionals and to certain consumer, commodity, and food industry groups. One concern was that use of the term "avoid" would be interpreted to mean "eliminate" foods that contained fat, saturated fat, and cholesterol from the diet.

Later in 1980, a Senate Committee on Appropriations directed that a committee be established to review scientific evidence and recommend revisions in the Dietary Guidelines *(27).* Such a review was considered desirable because of the continued intense interest in the information and because the state of knowledge in nutrition and dietary planning continued to advance. A Federal Advisory Committee of nine nutrition scientists selected from outside the Federal Government was convened in 1983 to review and make recommendations to USDA and HHS about the first edition of the Dietary Guidelines in anticipation of the next edition.

New Food Guide Developed

With the release of the first edition of the Dietary Guidelines, USDA began work on developing a new food guide that would help consumers put the guidelines into action in their daily food choices. The food guide focused on how to make food choices that met the objectives for **nutrient adequacy** and **moderation** of those components related to risk of chronic disease.

After development, the new food guide was first presented as a food wheel to consumers in 1984 as part of a nutrition course developed by USDA in cooperation with the American National Red Cross *(3).* The guide was also used in tabular form—"A Pattern for Daily Food Choices"—in several USDA publications released in the 1980's, including "Preparing Foods and Planning Menus Using the Dietary Guidelines" (Home and Garden Bulletin Number 8, 1989) and "Dietary Guidelines and Your Diet" (Home and Garden Bulletin Number 232-1, 1986).

Continued Revisions of the Dietary Guidelines

In 1985, HHS and USDA jointly issued a revised edition of the *Dietary Guidelines (20).* This second edition was nearly identical to the first. Some changes were made for clarity in wording; others added guidance about nutrition topics that became more prominent after 1980, such as following unsafe weight-loss diets, using large-dose supplements, and drinking of alcoholic beverages by pregnant women *(6).* These changes reflected advances in scientific knowledge of the associations between diet and a range of chronic diseases. The second edition received wide acceptance and was used as a framework for consumer education messages.

In 1987, a Conference Report of the House Committee on Appropriations indicated that USDA, in conjunction with HHS, "shall re-establish a Dietary Guidelines Advisory Group on a periodic basis" *(26).* In 1989, USDA and HHS established a second advisory committee that reviewed the 1985 Dietary Guidelines and made recommendations for revision in a report to the Secretaries of Agriculture and HHS *(7).*

The *Surgeon General's Report on Nutrition and Health* published in 1988 and the National Research Council's report, *Diet and Health: Implications for Reducing Chronic Disease Risk* published in 1989 were key resources used by the Dietary Guidelines Advisory Committee *(10, 25).* Other major resources were the 10th edition (1989) of the *Recommended Dietary Allowances* and the draft of a report by the Population Panel of the National Cholesterol Education Program *(11, 24).*

Another type of resource, research on the uses and usefulness of the second edition of the Dietary Guidelines, conducted at the University of Wisconsin and The Pennsylvania State University under USDA sponsorship, was also used by the Dietary Guidelines Advisory Committee *(1, 2, 14).* This type of research provided the Committee with input from professionals and consumers.

The 1988 Wisconsin study found widespread adoption and acceptance of the second edition of the Dietary Guidelines by Federal, State, and local professionals involved in the communication of food and nutrition information *(14).* The

health professionals interviewed emphasized the importance of having health and nutrition experts speak with one voice in identifying important dietary practices. They also urged that the Dietary Guidelines be kept constantly before the public, in a variety of presentations.

In the Pennsylvania study, consumer evaluation of the second edition (1985) of the Dietary Guidelines bulletin, using focus groups and in-depth interviews, showed that consumers wanted more specific food-related guidance, definitions of technical terms, and practical tips for behavior change strategies *(1, 2)*.

In 1990, USDA and HHS jointly released the third edition of the Dietary Guidelines *(21)*. The basic tenets of the Dietary Guidelines were reaffirmed, with additional refinements reflecting an increased understanding of the science of nutrition and suggestions for communicating that science to consumers. The new Dietary Guidelines were more positive and more oriented toward the total diet. They also, for the first time, contained suggested numerical limits for total fat and saturated fat intake, and short action statements in an "Advice for Today" section (e.g., "check to see if you are at a healthy weight") along with each guideline. In response to consumer evaluation of the previous edition, more practical advice was given on how to implement the Dietary Guidelines in daily food choices by including the food guide—*A Pattern for Daily Food Choices*—developed by USDA in the early 1980's *(3)*.

Also in 1990, The National Nutrition Monitoring and Related Research Act (7 U.S.C. 5341) was passed. This Act requires the Secretaries of Agriculture and Health and Human Services to publish jointly a report entitled *Dietary Guidelines for Americans* every 5 years. This legislation also requires review by the two Secretaries of all Federal publications containing dietary advice for the general public to assure that such guidance either is consistent with the *Dietary Guidelines for Americans* or is based on medical or new scientific knowledge, which is determined to be valid by the Secretaries.

The *Food Guide Pyramid* Released

In 1992, the *Food Guide Pyramid,* which was developed by USDA and supported by HHS, was released *(17)*. This was a new graphic presentation of the original food guide developed by USDA in the mid-1980's. A separate publication explaining the food guide was prepared, involving consumer testing with adults and children during development. The Pyramid graphic conveys in a memorable way the key messages of the food guide—**variety**, **proportionality**, and **moderation**. The intent of the *Food Guide Pyramid* is to help consumers put the Dietary Guidelines into action.

The *Food Guide Pyramid* has been widely used by nutrition educators in a variety of materials, including posters, textbooks, school curricula, and computer software, and has also been used by industry on food labels. Such wide use has helped to communicate the Dietary Guidelines' message.

The intent of the *Food Guide Pyramid* is to help consumers put the Dietary Guidelines into action.

...there have been few changes in the overall theme of the Dietary Guidelines over the past 15 years.

Process for Development of the 1995 Edition of the Dietary Guidelines

In 1994, USDA and HHS appointed an 11-member Dietary Guidelines Advisory Committee to review the 1990 edition of the Dietary Guidelines and determine if, on the basis of current scientific knowledge, revisions were warranted. The 1980, 1985, and 1990 editions of the Dietary Guidelines were issued voluntarily by USDA and HHS. The 1995 edition was the first report mandated by statute.

The Dietary Guidelines Advisory Committee held three public meetings from September 1994 through March 1995. All meetings were announced in the *Federal Register* and open to the public. Oral comments were received from the public during the second meeting. Additionally, written comments were solicited from the public. A search of Medline and AGRICOLA data bases for literature related to each guideline was performed and results were provided to the Committee by USDA and HHS staff. The Committee report was submitted to the Departments in June 1995 *(8)*. Consumer reactions to specific design and content elements of the Dietary Guidelines were obtained by USDA-sponsored research done in collaboration with HHS *(13)*.

Changes in the Dietary Guidelines Since 1980

Although the titles of some of the Dietary Guidelines have changed (see table), there have been few changes in the overall theme of the Dietary Guidelines over the past 15 years. There are seven guidelines for each edition. The target audience for the Dietary Guidelines has remained unchanged; they are directed to all healthy Americans 2 years of age and older.

Eat a variety of foods. The title of this guideline has remained the same for all four editions. The fourth edition added boxes listing good food sources of iron and calcium. It also added information about the new Nutrition Facts Label, which by Federal law is required on most packaged retail food products. A discussion of vegetarian diets was also added to demonstrate the compatibility of such diets with the advice in the Dietary Guidelines *(8)*.

Balance the food you eat with physical activity—maintain or improve your weight. The title of this guideline has seen several changes over the past 15 years. "Maintain ideal weight" was changed to "Maintain desirable weight" in 1985 because "ideal" seemed to imply an unduly precise understanding of what people should weigh *(6)*. The title was changed again in 1990 to "Maintain healthy weight" because a procedure was introduced to help people assess their weight relative to health outcomes. The Dietary Guidelines brochure has always included a weight table to help adults assess their own weight status. The third edition added information about waist-hip ratio to help relate weight to risk for chronic diseases, such as heart disease, certain types of cancer, and adult-onset diabetes *(7)*. In 1995, the title was changed to emphasize the importance of physical activity and energy balance. The weight table has been replaced with a chart that illustrates weight ranges for healthy weight, moderate overweight, and severe overweight. The suggested list of physical activities has also been updated based on recent research *(12)*.

Dietary Guidelines for Americans 1980-1995

1980	1985	1990	1995
Eat a variety of foods	Eat a variety of foods	Eat a variety of foods	Eat a variety of foods
Maintain ideal weight	Maintain desirable weight	Maintain healthy weight	Balance the food you eat with physical activity—maintain or improve your weight
Avoid too much fat, saturated fat, and cholesterol	Avoid too much fat, saturated fat, and cholesterol	Choose a diet low in fat, saturated fat, and cholesterol	Choose a diet with plenty of grain products, vegetables, and fruits*
Eat foods with adequate starch and fiber	Eat foods with adequate starch and fiber	Choose a diet with plenty of vegetables, fruits, and grain products	Choose a diet low in fat, saturated fat, and cholesterol*
Avoid too much sugar	Avoid too much sugar	Use sugars only in moderation	Choose a diet moderate in sugars
Avoid too much sodium	Avoid too much sodium	Use salt and sodium only in moderation	Choose a diet moderate in salt and sodium
If you drink alcohol, do so in moderation	If you drink alcoholic beverages, do so in moderation	If you drink alcoholic beverages, do so in moderation	If you drink alcoholic beverages, do so in moderation

* In the 1995 edition, the order of the third and fourth guidelines has been reversed.

Choose a diet with plenty of grain products, vegetables, and fruits. The title of this guideline remained the same in 1980 and 1985. In 1990, the title was changed, in part due to research that indicated that consumers found the earlier title to be too difficult to follow *(7)*. The new title placed more emphasis on foods rather than nutrients. In 1995, this guideline was moved up from fourth position to third to give it more prominence. The title was changed slightly to make it consistent with the placement of food groups within the *Food Guide Pyramid (8)*. The text of the guideline has added information on food sources of folate and carotenoids, and the relationship of these nutrients to health outcomes is discussed.

Choose a diet low in fat, saturated fat, and cholesterol. The title of this guideline remained the same in 1980 and 1985. In 1990, the title was changed to make clear that the fat content of the total diet, not just individual foods, is of concern *(7)*. The word "avoid" was removed to eliminate the possible misunderstanding that fats are to be completely eliminated from the diet. The 1995 edition concurs with the 1990 wording. The text of the 1995 edition adds more information about types and sources of fatty acids in the diet (including information about omega-3 polyunsaturated and ***trans*** fatty acids). It continues the 1990 recommendation for upper limits on total fat and saturated fat but recommends that children

...it is likely that the underlying themes of variety, proportionality, and moderation initiated about 100 years ago will apply to choosing healthful diets for many years to come.

gradually adopt the guideline from age 2 to 5 years, so that by the time children are in elementary school, they should be consuming diets that follow the Dietary Guidelines *(8)*.

Choose a diet moderate in sugars. The title of this guideline was the same in 1980 and 1985 but changed in 1990. The term "sugars" was used to more accurately define the foods of concern (table sugar as well as other caloric sweeteners, which were listed in the text) *(7)*. The word "avoid" was removed to provide a more positive tone to the guideline. In 1995, the title of the guideline changed again to provide consistency with the other guidelines' focus on the total diet *(8)*. The text of the 1995 edition placed more emphasis on sugars as a calorie source and less on the relationship of sugars' intake to dental health. The text also added the statement that the body cannot distinguish between naturally occurring and added sugars *(8)*.

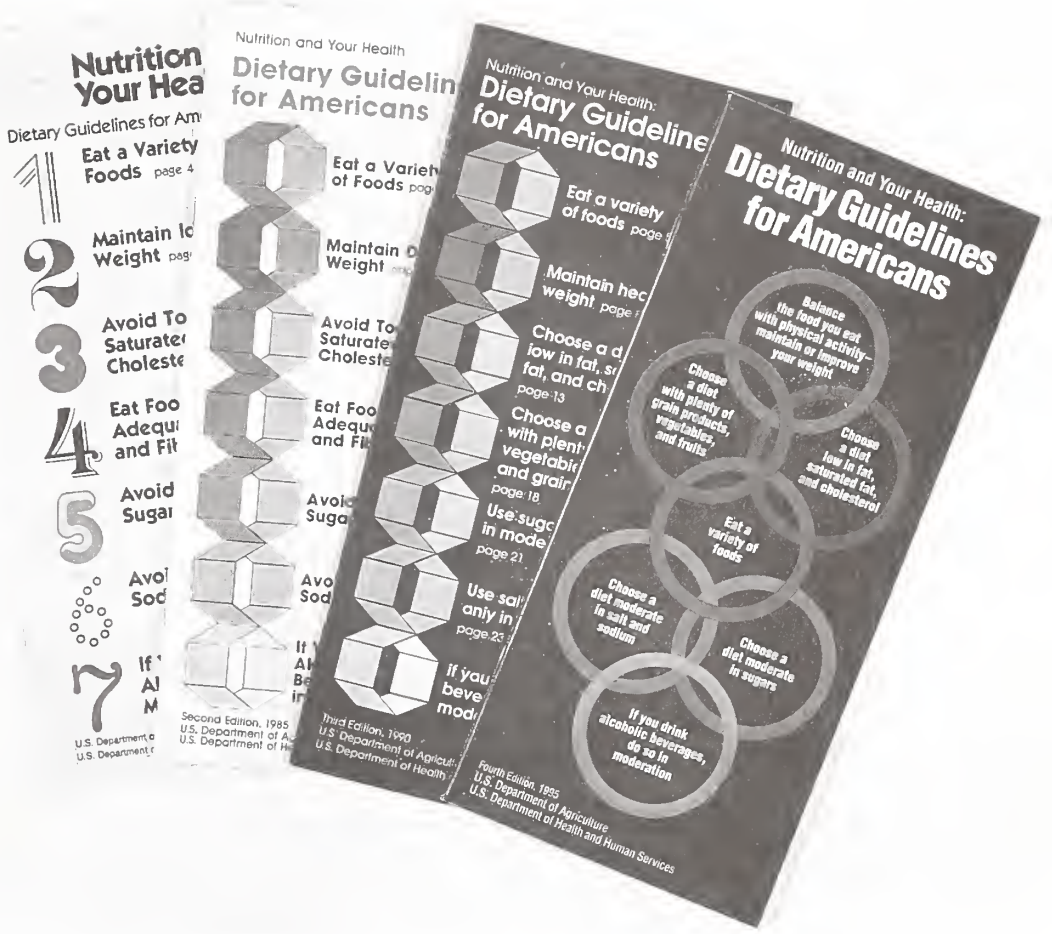
Choose a diet moderate in salt and sodium. The title of this guideline remained unchanged in 1980 and 1985. In 1990, the word "salt" was added because it is the source of most sodium in American diets and is better understood by consumers than "sodium" *(7)*.

As with the fat and sugar guidelines, the term "avoid" was deleted to give the guideline a more positive tone. In 1995, the title changed again, to place an emphasis on the total diet. The term "use" was removed because it might be misunderstood by consumers to mean that only salt added by them in cooking or at the table is a problem, when in fact, most of the sodium in American diets is added as salt during processing *(8)*. Information was added about the relationship of nutrients other than sodium to blood pressure, and a list of good food sources of potassium was added. The guideline also refers to the level of sodium (2,400 mg) listed as the Daily Value on the Nutrition Facts Label.

If you drink alcoholic beverages, do so in moderation. In 1985, the title of the guideline changed slightly. The term "alcohol" was changed to "alcoholic beverages" to reflect the correct terminology *(6)*. The title of the guideline has remained unchanged since that time. The 1995 edition retains the definition of moderate drinking, but it appears earlier in the text than in the previous edition. The list of those who should not drink has been reordered so that children and adolescents appear first. The text expands the statement in the 1990 guidelines to emphasize the food use of alcoholic beverages rather than the social drug use *(8)*.

Brochure Presentation: Design and Format Changes

The "look" of the Dietary Guidelines brochure has changed over the years. The graphic on the front cover of the first edition included a number for each of the guidelines (see figure). The numbers were eliminated in subsequent editions because they led to misconceptions that certain guidelines were more important than others. The second and third editions used an interlocking chain and the fourth edition uses interlocking circles on the front cover to convey the concept that all of the guidelines are interrelated.



The Dietary Guidelines brochure has always included boxes with practical "how-to" information, such as tips for reducing fat and sodium intake *(19, 20)*. The third edition added brief "Advice for Today" sections *(21)*. The fourth edition added subtitles to improve readability of the brochure *(22)*.

USDA's Food Guide made its first appearance in the third edition of the Dietary Guidelines. The graphic illustration of the Food Guide, the *Food Guide Pyramid*, appears in the fourth edition.

Future of the Dietary Guidelines

The Dietary Guidelines have provided a consensus as to what makes a healthy diet. They also form the basis of Federal nutrition policy affecting food, nutrition education, and information programs. They will continue to be reviewed every 5 years and revised as the science base evolves. However, as the Dietary Guidelines are revised in the future, it is likely that the underlying themes of **variety**, **proportionality**, and **moderation** initiated about 100 years ago will apply to choosing healthful diets for many years to come.

Since the initial release of the *Dietary Guidelines for Americans* in 1980, each edition has gained in acceptance and use by both professionals and consumers. USDA and HHS acknowledge the role that nutrition educators and health professionals have played in this greater acceptance and use and look forward to their continued support *(14)*.

References

1. Achterberg, C.L., Getty, V.M., Pugh, M.A., Durrwachter, J.G., and Trenkner, L.L. 1989. *Evaluation of "Nutrition and Your Health: Dietary Guidelines for Amerians;" Part I: A Women's Sample*. Prepared for U.S. Department of Agriculture, Human Nutrition Information Service.

2. Achterberg, C.L., Ozgun, M.P., McCoy, J., and Getty, V.M. 1991. *Evaluation of "Nutrition and Your Health: Dietary Guidelines for Americans;" Part II: A Men's Sample*. Prepared for U.S. Department of Agriculture, Human Nutrition Information Service.

3. American Red Cross. 1984. *Better Eating for Better Health: Instructor's Guide and Participants' Packet*. American National Red Cross, Washington, DC.

4. Atwater, W.O. 1894. *Foods: Nutritive Value and Cost*. Farmers' Bulletin No. 23. U.S. Department of Agriculture.

5. Atwater, W.O. 1902. *Principles of Nutrition and Nutritive Value of Food*. Farmers' Bulletin No. 142. U.S. Department of Agriculture.

6. Dietary Guidelines Advisory Committee. 1985. *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans*. U.S. Department of Agriculture, Human Nutrition Information Service.

7. Dietary Guidelines Advisory Committee. 1990. *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans*. U.S. Department of Agriculture, Human Nutrition Information Service.

8. Dietary Guidelines Advisory Committee. 1995. *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 1995*. U.S. Department of Agriculture, Agricultural Research Service.

9. Hunt, C.L. 1916. *Food for Young Children*. Farmers' Bulletin No. 717. U.S. Department of Agriculture.

10. National Academy of Sciences, National Research Council, Food and Nutrition Board. 1989. *Diet and Health: Implications for Reducing Chronic Disease Risk*. National Academy Press, Washington, DC.

11. National Academy of Sciences, National Research Council, Food and Nutrition Board. 1989. *Recommended Dietary Allowances* (10th ed.). National Academy Press, Washington, DC.

12. Pate, R.R., Pratt, M., Blair, S.N., et al. 1995. Physical activity and public health: A recommendation from the Centers for Disease Control and Prevention and the American College of Sports Medicine. *Journal of the American Medical Association* 273*(5)*:402-407.

13. Prospect Associates. 1995. *Dietary Guidelines Focus Group Report*. Unpublished report prepared for U.S. Department of Agriculture, Center for Nutrition Policy and Promotion.

14. Steele, S.M. 1990. *Cooperative Extension's Use of Dietary Guidelines and Your Diet and Suggestions About Revisions.* Unpublished report prepared for U.S. Department of Agriculture, Human Nutrition Information Service.

15. U.S. Department of Agriculture. 1958. *Food for Fitness—A Daily Food Guide.* Leaflet No. 424.

16. U.S. Department of Agriculture, Bureau of Human Nutrition and Home Economics. 1946. *National Food Guide.* AIS-53, Rev. of NFC-4.

17. U.S. Department of Agriculture, Human Nutrition Information Service. 1992. *The Food Guide Pyramid.* Home and Garden Bulletin No. 252.

18. U.S. Department of Agriculture, Science and Education Administration. 1979. *Food.* Home and Garden Bulletin No. 228.

19. U.S. Department of Agriculture and U.S. Department of Health and Human Services. 1980. *Nutrition and Your Health: Dietary Guidelines for Americans.* U.S. Department of Agriculture. Home and Garden Bulletin No. 232.

20. U.S. Department of Agriculture and U.S. Department of Health and Human Services. 1985. *Nutrition and Your Health: Dietary Guidelines for Americans* (2d ed.). U.S. Department of Agriculture. Home and Garden Bulletin No. 232.

21. U.S. Department of Agriculture and U.S. Department of Health and Human Services. 1990. *Nutrition and Your Health: Dietary Guidelines for Americans* (3d ed.). U.S. Department of Agriculture. Home and Garden Bulletin No. 232.

22. U.S. Department of Agriculture and U.S. Department of Health and Human Services. 1995. *Nutrition and Your Health: Dietary Guidelines for Americans* (4th ed.). U.S. Department of Agriculture. Home and Garden Bulletin No. 232.

23. U.S. Department of Health, Education, and Welfare, Public Health Service. 1979. *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention.* DHEW (PHS) Publication No. 79-55071.

24. U.S. Department of Health and Human Services, National Heart, Lung, and Blood Institute. 1990. *National Cholesterol Education Program: Report of the Expert Panel on Population Strategies for Blood Cholesterol Reduction.*

25. U.S. Department of Health and Human Services, Public Health Service. 1988. *The Surgeon General's Report on Nutrition and Health.*

26. U.S. House of Representatives Conference Committee, 100th Cong., 1st sess. 1987. H.R. 498.

27. U.S. Senate Agricultural Appropriations Committee. 1980. Senate Report No. 96-1030 Nov. 20.

28. U.S. Senate Select Committee on Nutrition and Human Needs. 1977. *Dietary Goals for the United States* (2d ed.).

Dietary Guidance and Nutrition Promotion: USDA's Renewed Vision of Nutrition Education

Sharyn M. Sutton[1]
President
Sutton Social Marketing

William Layden
Director, Nutrition Promotion Staff
Center for Nutrition Policy and Promotion

Jackie Haven
Nutritionist
Center for Nutrition Policy and Promotion

The United States has a proven process for continually developing national dietary guidance. This guidance, as reflected in the bulletin *Nutrition and Your Health: Dietary Guidelines for Americans,* represents the Federal Government's policy on nutrition. Over the last 15 years, a consensus on diet and its effect on health has developed among U.S. nutrition and health experts. This paper addresses the relationship between the expert consensus on "nutrition, diet, and health" and the consumer. It distinguishes between dietary guidance and nutrition promotion: nutrition promotion uses the Consumer-Based Health Communications process to translate the science-based dietary guidance into consumer-oriented messages that facilitate behavior change. The implications for USDA's dietary guidance and nutrition education efforts are discussed.

The United States has an established procedure for updating national dietary guidance. Title III of the National Nutrition Monitoring and Related Research Act of 1990 (7 U.S.C. 5341) requires the Secretaries of Agriculture and Health and Human Services to publish jointly every 5 years a report entitled *Dietary Guidelines for Americans.* An appointed Dietary Guidelines Advisory Committee reviews the most up-to-date research and makes recommendations to the U.S. Department of Agriculture (USDA) and the U.S. Department of Health and Human Services (DHHS). After the recommendations are approved and accepted by the Departments, the recommended Dietary Guidelines and explanatory text are issued in a bulletin called *Nutrition and Your Health: Dietary Guidelines*

[1]Formerly Director, Nutrition Marketing and Education, Center for Nutrition Policy and Promotion.

for Americans (15). The Dietary Guidelines for Americans constitutes the basis of the Federal Government's policy on nutrition.

Over the last 15 years, a remarkable degree of consensus on diet and its effect on health has developed among U.S. nutrition and health experts. The fourth edition of the *Dietary Guidelines for Americans (15)*, released by USDA and DHHS in 1995, provides nutritional and dietary information and guidelines for the general public, based on current scientific and medical knowledge *(9)*.

Consensus on the relationship between diet and health is critical to improving public health since diet has been linked to many chronic and preventable diseases:

- Four of the leading causes of death in the United States are nutrition-related *(16)*. Heart disease, cancer, stroke, and diabetes account for more than 1.4 million deaths annually, nearly two-thirds of the U.S. total *(16)*.
- Diet also plays a role in other health conditions such as overweight, hypertension, and osteoporosis, which can reduce the quality of life and productivity and contribute to premature death *(16)*.

Taken together, these seven diet-related health condtions cost society an estimated $250 billion each year in medical costs and lost productivity *(6)*. Improved dietary behavior might prevent at least 20 percent of the annual deaths from heart disease, cancer, stroke, and diabetes *(6)*. Even small improvements in average dietary intakes towards the *Dietary Guidelines for Americans* can be valuable

If intakes in fat, saturated fat, and cholesterol improved in the range of 0.1 to 1.4 percent, the Food and Drug Administration (FDA) estimates between $4.4 to $26.5 billion would be saved over 20 years *(13)*.

This paper addresses the relationship between the expert consensus on "nutrition, diet, and health," as reflected in the Dietary Guidelines, and the consumer. It examines how the state of dietary knowledge is transferred to the consumer and its effect on consumer eating behaviors. The implications for USDA's dietary guidance and nutrition education efforts are discussed.

Nutrition, Health, and the Consumer

The *Dietary Guidelines for Americans* is supported by a rich history of science-based research and analysis. The guidelines are scientifically sound and have been remarkably consistent over the past 20 years.

While we have achieved success in developing science-based dietary guidance, we have been much less successful in translating this guidance for consumers in a way that educates and motivates changes in behavior leading to improved health status.

There is a serious gap between the experts' agreement on dietary guidance and the consumer's understanding of what constitutes a healthy diet. It is ironic that while scientific consensus has never been stronger, the consumers we seek to serve through this consensus remain very confused about dietary advice. Several recent national surveys highlight current consumer perceptions.

- Almost 50 percent of Americans say that there is too much conflicting information about what foods are good for them, and they are uncertain about what to eat *(5)*.
- *The Dietary Guidelines for Americans* emphasize the importance of balance, variety, and moderation in the total diet—meaning that any food can fit into a healthful diet. But 70 percent of consumers think that they must eliminate favorite foods to improve their diets *(1)*. The percent of consumers concerned about getting a balanced diet dropped from 11 percent in 1988 to 2 percent in 1995 *(4)*.
- Dietary guidance is presented in a manner that is frequently misinterpreted by consumers in their attempt to build a healthy diet. For instance, "consumer unfriendly" advice on limiting total calories from fat to 30 percent is often interpreted by consumers to mean that they should not eat individual foods with more than 30 percent calories from fat *(1, 5, 8)*.
- In addition, old perceptions and past nutrition advice linger in the minds of consumers. For example, whereas today's nutritionists are urging greater consumption of breads and grains, 40 percent of Americans still think that bread is fattening, and 35 percent say starches should be avoided *(17)*.

Consumer confusion and frustration over nutrition does not mean that they have given up or are incapable of changing their eating patterns. On the contrary, there are numerous examples that reflect the changes in the national nutrition agenda.

The increasing focus on fat in the American diet over the past decade is related to significant changes in consumer awareness, concern, and consumption. Consumer concern over fat content in foods has escalated dramatically. When asked:

> *"What is it about the nutritional content of the foods you eat that concerns you most?"*

the number of consumers who responded "fat content" jumped from 27 percent in 1988 to 65 percent in 1995 *(4)*. Likewise, the mean percent of calories from fat has declined from 36 percent to 34 percent of total calories, although these levels are still above dietary recommendations *(7)*.

The fact is that many consumers **do** change their dietary behavior—but the changes reflect their understanding and interpretation of dietary advice. The ability of consumers to improve their health depends upon how successfully they can translate the science-based dietary guidance into appropriate patterns of eating behaviors that lead to improved nutritional status. For example, an attempt to reduce intake of dietary fat by decreasing consumption of red meat will be successful only if meat consumption is not replaced by an equally high-fat substitute (e.g., high-fat salad dressings) *(11)*.

Dietary Guidance and Nutrition Promotion

Changing diet-related behaviors is more complicated than once thought. Although it is possible to improve people's knowledge and attitudes about food and nutrition, this does not necessarily result in the needed behavior change. There is now serious concern whether providing consumers with dietary guidance is sufficient to support behavior changes that lead to improved health.

A recent discussion among nutrition education leaders from various national organizations revealed strongly held beliefs that dietary guidance is not the best message for consumers, particularly if the goal is behavior change. "Consumers do not even have to see the [Dietary] Guidelines" *(2)*. This contrasts greatly with the traditional nutrition education efforts surrounding the Dietary Guidelines. These efforts centered on the publication of a consumer bulletin, *Nutrition and Health: Dietary Guidelines for Americans*, that outlined seven guidelines and provided explanatory text. The focus was the nutrition science-base, not the needs of the consumer. The nutrition education leaders conceded that we currently know more about what a healthy diet is than about how to get it across to consumers. These professionals stated that consumer needs and behavior must play a central role in driving nutrition education programs to produce behavior change *(2)*.

This consumer perspective is the foundation of USDA's renewed vision for nutrition education. In May 1995, the Secretary of Agriculture announced a new comprehensive **nutrition promotion** effort to develop **consumer-based** messages. USDA's recommitment to nutrition as one of six key mission areas is reflected in the establishment of the Center for Nutrition Policy and Promotion (CNPP) *(10)* **"to improve the nutritional status of Americans by serving as the focal point within USDA for linking scientific research and the consumer."**

The term "nutrition promotion" is used to differentiate this new concept from past definitions of "nutrition education." **Nutrition promotion** is defined as the translation of science-based dietary guidance into consumer-oriented messages that facilitate the appropriate eating behaviors. Nutrition promotion is based on **consumer research**. It follows the Consumer-Based Health Communications approach, which combines the science base with the consumer's reality to create a message strategy that is meaningful and motivating to the consumer. The outcome of nutrition promotion is a consumer-based message strategy that will lead consumers to follow science-based dietary guidance *(14)*.

Consumer Perceptions of Dietary Guidance

Traditionally, the actual Dietary Guidelines, as suggested by the Dietary Guidelines Advisory Committee and approved by USDA and DHHS, have been issued in a bulletin called *Nutrition and Your Health: Dietary Guidelines for Americans (15)*.

The Dietary Guidelines Advisory Committee recognized the difficulty of having a single dietary guidance bulletin to address the needs of consumers, policymakers, and health professionals. The Committee felt it was important to investigate consumers' reaction to the guidelines and their understanding of nutrition concepts in the Dietary Guidelines bulletin as a first step, preceding the focus on nutrition promotion to improve dietary behavior *(3)*.

The Advisory Committee encouraged USDA and DHHS to continue to conduct consumer research to determine understanding of selected dietary guidance messages proposed for the 1995 Dietary Guidelines for Americans bulletin *(15)*. The Committee also urged the Departments to use consumer research to design more meaningful messages to consumers.

In response to the Committee's recommendation, CNPP/USDA, in consultation with DHHS, sponsored focus group research to gauge consumer reactions to specific design and content elements of an early draft of the 1995 bulletin as published in the Technical Report *(3)*. The following section describes the methodology and research objectives *(12)*.

Focus Groups on Dietary Guidelines

A series of 12 focus groups was conducted between May 31 and June 8, 1995. To obtain some geographic dispersion, four groups were conducted in each of three cities—Richmond, VA; Chicago, IL; and San Francisco, CA. Half of the 12 groups were conducted with women and half with men. A total of 107 consumers participated. In addition, four of the groups were conducted with general consumers representing a variety of respondents—within broad age, income, and education restrictions—while still maintaining enough homogeneity so the groups could discuss the issues in a coherent fashion.

The remaining eight groups were conducted with four target audiences: African Americans, older consumers, overweight consumers, and food stamp recipients. These target audiences were selected because of their potentially different perspectives on the Dietary Guidelines reflecting different health and diet attitudes, practices, and needs.

During the group discussions, participants were presented with three versions of a mocked-up Dietary Guidelines bulletin. Throughout the sessions, participants were asked to read and respond to various sections and formats of the mock-ups.

Specific research objectives included: Assessing consumer perceptions and understanding of selected dietary concepts and key terms such as moderation; assessing perceived barriers in following the Dietary Guidelines; and assessing consumer reaction to the actual presentation of the consumer bulletin.

As a qualitative research methodology, focus groups are not projectable to any population. However, they provide valuable insight into how the consumer views the world and what the consumer thinks—in this case—about nutrition and eating.

Emerging Consumer Themes

Findings from this focus group research can be presented under four general themes with illustrative quotes. All quotes from individuals participating in the focus groups are taken from the unpublished report prepared by Prospects Associates for USDA *(12)*.

1. Distinguish Between Dietary Guidance AND Nutrition Promotion

The focus group research found strong support for making the distinction between dietary guidance and nutrition promotion. Reactions from the participants made it very clear that there is a difference between dietary guidance—

The ability of consumers to improve their health depends upon how successfully they can translate the science-based dietary guidance into appropriate patterns of eating behaviors that lead to improved nutritional status.

...consistent consumer-based messages leading to behavior change must be based on dietary guidance.

what is known about nutrition—and nutrition promotion—what is needed by consumers to actually follow the dietary guidance. Both are critical.

Dietary guidance or nutrition knowledge does not necessarily give consumers the information and/or motivation to change their behavior. Nutrition knowledge does not in itself help consumers to act. However, it must be acknowledged that consistent consumer-based messages leading to behavior change must be based on dietary guidance. We need both dietary guidance and nutrition promotion.

> *"I think it's [the Dietary Guidelines brochure] good for a brief overview... I'm going to need something that's going to give me more about what I want to know."*
> [African American male]

> *"It would have no bearing for me. I wouldn't even know how to begin controlling it [fat intake].... They need to say that you need to eat these items that are lower in fat."*
> [General public—male]

> *"I just know that there are a lot of fats, and they are bad."*
> [General public—male]

2. Effective Nutrition Promotion Must Communicate Consumer Benefits

The focus group discussions showed that participants were not motivated by the health consequences that underpin the Dietary Guidelines. Consumer benefits, as perceived by the consumer, were what mattered most. Therefore, we need to identify and promote benefits for healthy eating that have meaning in the mind of the consumer.

> *"What's in it for me?... What would I get out of it?"*
> [General public—male]

> *"What's the pay-off for doing this? That's what I want to know."*
> [General public—male]

If we don't offer meaningful, motivating consumer benefits, we will lose our audience:

> *"And after a while, you get so discouraged, you say the heck with it. I'm just going to eat it and see what happens."*
> [General public—female]

3. Translate Dietary Guidelines Into Consumer Behaviors

Consumers need to have the dietary guidance translated into consumer behaviors or actions. Consumers want directions; they want to know what to do.

Dietary Guidelines are not consumer behaviors. Dietary concepts such as fat reduction and consumption of fruits and vegetables are not necessarily relevant to how consumers live their lives. They do not communicate in terms that define consumers' actions.

> *"Everybody knows you should eat more vegetables and fruits. It's in the media. We know that. But it's about doing it. Helpful hints about how you can do it."*
> [Food Stamp—female]

> *"Show us what 300 mg [of cholesterol] looks like. Is it half an egg? Is that a full egg? Is that one and one-half eggs? Because when you see 300 mg, you think, what's 300 mg?"*
> [General public—male]

"To be perfectly honest, I have never considered how many calories I eat in a day. 2,000 is just as arbitrary as saying 5,000. I'm going to eat what I want to eat."
[General public— male]

"They keep throwing [the advice] to eat vegetables at you—vegetables as a group. But a lot of people don't know things like avocados are very fattening. There are different vegetables that people should watch out for—instead of just having vegetables in general."
[Food Stamp—male]

"Just don't tell me not to do something. What is [the fat]? Where do I find it? "
[Overweight group—male]

Nutrition concepts and desired nutrition outcomes (e.g., reduce fat, increase consumption of grains, watch total calories) are not consumer behaviors. Consumers don't reduce fat content; they remove the skin on their chicken. They don't choose a diet with plenty of grain products; they eat spaghetti. We need to translate the Dietary Guidelines into actual consumer steps—much more in line, for example, with the 5 A Day program where "eat more fruits and vegetables" becomes "keep fruits visible" or "microwave your carrots in 2 minutes."

It is clear that if the public is to follow the Dietary Guidelines, the Dietary Guidelines will need to be translated into consumer-based message strategies and specific behaviors that consumers can carry out. They do not want to do the math.

4. Express Consumer Behavior in Consumer Talk

The last general theme that emerged from the focus groups was the need to speak in a language that consumers understand. Consumers want specifics—clear, easy, meaningful information—on what they should do. They do not have the time, energy, or background to move from nutrition science and recommendations to a healthy diet.

"I want a sample dietary plan. Show me the foods [I] should eat and how much fat or grams of fat each food has, so I can visualize [it and] follow this type of diet."
[General public—male]

"I think that people are eating them (fruits and vegetables); it's just that they're not eating them properly. It doesn't say don't cook this way. Or they don't give you suggestions of different ways of preparing them."
[Food Stamp group—female]

"They're talking about saturated and unsaturated fats, and mono-unsaturated and polyunsaturated. And what are they? What are these things they are telling me about?"
[Overweight group—male]

Information that is matter of fact to nutritionists may not be credible or understandable to the consumer. For example, nutritionists know that it is the total diet that counts, not an individual food. But how does that message play with the consumer? Is it perceived as meaningful? Believable? Achievable? These questions must be answered in order to craft a "total diet message."

"Like I said before, I believe that if you're going to put out advice you should have do's and don'ts and not "political correctness" so that everything is positive."
[Older Americans group—male]

"My thing is that I don't count calories. I know that I eat food that's lower in fat. I used to make the mistake of counting calories and it didn't work because that meant I ate all the macaroni and cheese that I wanted and stuff like that. I still maintained or gained weight."
[African American—female]

It must also be recognized that consumers are not all alike. Messages must be tailored to varying informational and motivational needs. One bulletin or brochure will never do the entire job. This is shown by these two consumer comments to the same brochure:

"I knew that from before, but it's pretty clear in here."
[African American—male]

"Well, [this is clear] if you know Greek."
[Overweight group—female]

Implications for Nutrition Promotion

The insight gained from the focus groups reinforced the Dietary Guidelines Advisory Committee's recommendation for a two-pronged approach. USDA's renewed vision for nutrition education must meet two significant challenges:

- Continue to advance national dietary guidance based upon the preponderance of scientific evidence, and
- Promote this guidance to consumers in a way that will lead to behavior change and ultimately improved health and well-being.

Knowledge of what consumers believe, value, need, and do is as important as our knowledge of basic human nutrition.

Moving from traditional issuance of dietary guidance to consumer-based nutrition promotion will require the following:

- **A focus on behavior change.** The ultimate purpose of dietary guidance and promotion is to improve dietary behavior. Behavior change cannot occur unless it is purposefully targeted for change. If changes in knowledge and attitude are the end points, then improvements will not be achieved.
- **A strong consumer orientation.** Understanding and emphasizing the nutrition behavior from the consumer's point of view is essential. Knowledge of what consumers believe, value, need, and do is as important as our knowledge of basic human nutrition. Speaking in a language that the consumer understands, in a way that is lively, appealing, and entertaining, is just as critical as communicating the nutritional facts.
- **Segment and target consumers.** There must be recognition that one message will not meet the needs of the entire public. We must have a clear and vivid picture of who the target is and focus the message in a personal and meaningful way on precise audience segments to create the most impact.
- **Use multiple, reinforcing, interactive channels** that actually reach consumers. Various, integrated, new technologies exist today that can reach the target audience to deliver the message through multiple and reinforcing media. Again, these channels must be selected from the consumer's viewpoint: Where will they be open to the message? When will they be thinking about nutrition? Based on a thorough understanding of the audience—TV advertising, radio advertising, cable programming, talk shows, newspaper editorials, lifestyle sections, food columns, consumer magazines, direct promotions, point of purchase programs, promotions, interpersonal/intermediary partnerships—all can be useful to deliver and reinforce the message.
- **Continually refine the consumer messages.** What works today may be ineffective tomorrow because of the changes in our consumers, the marketplace, the competition, and the consumer benefits.

References

1. The American Dietetic Association and International Food Information Council. 1994. *How Are Americans Making Food Choices?—1994 Update*. Prepared by The Gallup Organization.

2. Balch, G.I. 1995. *Expert Advice on the Direction of Nutrition Education and Promotion.* Final Report to the Center for Nutrition Policy and Promotion. Unpublished.

3. Dietary Guidelines Advisory Committee. 1995. *Report of the Dietary Guidelines Advisory Committee on the Dietary Guidelines for Americans, 1995, to the Secretary of Health and Human Services and the Secretary of Agriculture*. U.S. Department of Agriculture, Agricultural Research Service.

4. Food Marketing Institute. 1995. *Trends in the United States, Consumer Attitudes and the Supermarket, 1995*. Conducted by Opinion Research Corporation.

5. Food Marketing Institute and *Prevention* Magazine. 1995. *Shopping for Health 1995. New Food Labels, Same Eating Habits?*

6. Frazao, E. 1995. *The American Diet: Health and Economic Consequences*. U.S. Department of Agriculture, Agriculture Information Bulletin No. 711.

7. McDowell, M.A., Briefel, R.R., Alaimo, K., Bischof, A.M., Caughman, C.R., Carroll, M.D., Loria, C.M., and Johnson, C.L. 1994. Energy and macronutrient intakes of persons ages 2 months and over in the United States: Third National Health and Nutrition Examination Survey, Phase 1, 1988-91. *Advance Data* No. 255. National Center for Health Statistics.

8. National Live Stock and Meat Board and MRCA Information Services, Inc. 1994. *Eating in America Today: A Dietary Pattern and Intake Report*. Edition II.

9. The National Nutrition and Related Research Act. 1990. 7 U.S.C. 5341.

10. 1995 Farm Bill: Guidance of the Administration. Section 5: Food and Nutrition, pp. 67-73, 1995.

11. Popkin, B.M., Haines, P.S., and Reidy, K.C. 1989. Food consumption trends of U.S. women: Patterns and determinants between 1977 and 1985. *American Journal of Clinical Nutrition* 49:1307-1319.

12. Prospects Associates. 1995. *Dietary Guidelines Focus Group Report*. Unpublished report prepared for the U.S. Department of Agriculture, Center for Nutrition Policy and Promotion.

13. Research Triangle Institute. 1991. *Estimating the Benefits of Nutrition Label Changes*.

14. Sutton, S.M., Balch, G.I., and Lefebvre, C. 1995. Strategic questions for consumer-based health communications. *Public Health Reports* 110*(6)*:725-733.

15. U.S. Department of Agriculture and U.S. Department of Health and Human Services. 1995. *Nutrition and Your Health: Dietary Guidelines for Americans*. 4th ed. Home and Garden Bulletin No. 232.

16. U.S. Department of Health and Human Services. 1990. *Healthy People 2000, National Health Promotion and Disease Prevention Objectives*. DHHS Publication No. (PHS) 91-50212.

17. Wheats Food Council and American Bakers Association. 1995. *What America Thinks About Eating Right*. A Gallup opinion survey.

Healthy People 2000 Midcourse Review and 1995 Revisions

Summarized by Joanne F. Guthrie
Nutritionist
Center for Nutrition Policy and Promotion

When the *Dietary Guidelines for Americans* was first published in 1980 as a statement of Federal nutrition policy and a summary of the best knowledge of how diet can promote health, the Federal Government was also considering new ways of directing and monitoring its health promotion and disease prevention activities in order to increase their effectiveness.

In *Promoting Health/Preventing Disease: Objectives for the Nation*, published in 1980, the U.S. Department of Health and Human Services adopted a management-by-objectives planning process borrowed from the business world: to set measurable objectives for improvements in health status and risk reduction for Americans. These objectives were broad in scope, encompassing such areas as nutrition, substance abuse, cardiovascular risk factor reduction, and many others. Several of the nutrition objectives were consistent with the recommendations or goals of the *Dietary Guidelines for Americans*. Measurable levels of improvement (target outcomes) in each area were established for achievement in 1990.

In 1990, *Healthy People 2000: National Health Promotion and Disease Prevention Objectives* was published. The *Year 2000* objectives built upon those established in 1980, with some modification and expansion. For example, such health problems as HIV infection and cancer were added as priority areas.

As in 1990, a key aspect of the project was the development of measurable objectives for monitoring improvement. Again, the nutrition objectives frequently paralleled the *Dietary Guidelines for Americans*. For example, *Year 2000* nutrition objectives include decreased consumption of total fat, saturated fat, and sodium; increased consumption of fruits, vegetables, and grains; and reduction in the prevalence of overweight, all recommendations of the *Dietary Guidelines for Americans*.

The *Healthy People 2000 Midcourse Review and 1995 Revisions* provides a mid-decade report on progress on these objectives. The midcourse review also prompted development of new objectives in response to changes in health knowledge and health concerns. The box on pp. 24-25 presents nutrition objectives for the year 2000 plus six objectives from other priority areas that have been added to the Nutrition priority area in 1995.

The findings presented here are a summary of those reported in the *Healthy People 2000 Midcourse Review and 1995 Revisions*. The data reported are taken from the review itself, although the original data used to evaluate progress

toward objectives were obtained from a wide range of public and private sources and compiled for the review.

Three overarching goals have been established for the *Healthy People 2000* initiative. These are to: (1) increase the span of healthy life for Americans, (2) reduce health disparities among Americans, and (3) achieve access to preventive services for all Americans. Priority areas for health improvements that would lead to the achievement of these goals have also been established. There are 22 priority areas, which fall into three broad categories—health promotion, health protection, and preventive health services.

Within each priority area, objectives have been set for improvement. The objectives are designed to achieve three major types of outcomes—changes in health status, changes in risk reduction factors, and changes in health care service and protection. Health status objectives assess progress toward reduction of death, disease, and disability and enhancement of functional status, including physical, mental, and social functioning. Risk reduction objectives target the reduction of physical, environmental, social, or behavioral risks to health (e.g., cigarette smoking, use of safety belts). Services and protection objectives are aimed at increasing the comprehensiveness, accessibility, and/or quality of preventive services and protective interventions (e.g., blood pressure and cholesterol screening, testing for lead-based paint in older homes).

For each objective, baseline data have been obtained whenever possible and measurable target figures established for accomplishment of the objective. In addition to objectives that address the total population, more than 200 objectives or subobjectives address needs of special population groups. In all, there are more than 500 specific objectives and subobjectives for which targets have been established.

Summary of Progress

Halfway to the year 2000, a review of the available data indicates that progress is being made in accomplishing many but not all of the *Healthy People 2000* goals and objectives. Since 1990, average life expectancy has increased by about three-quarters of a year, reaching a new high of almost 76 years. The infant mortality rate declined to a new low of 8.5 per 1,000 live births in 1992. However, international data indicate that there is still room for improvement: compared with other industrialized nations, the United States ranks 24th in infant mortality rates.

Progress toward meeting established targets has been made on about 50 percent of the objectives. For 18 percent, however, the situation has worsened, with available data indicating movement further away from the target; 3 percent show no change from the baseline; and for the remaining 29 percent, evaluation data are not yet available.

To provide a broad perspective on the overall progress of the initiative, 47 "sentinel" objectives were selected for particular examination (see table, pp. 26-27). There are sentinel objectives for each of the 22 priority areas, allowing assessment of progress in each area.

Progress...has been made on about 50 percent of the objectives. For 18 percent...the situation has worsened...3 percent show no change... and for the remaining 29 percent, evaluation data are not yet available.

Nutrition Objectives

Health Status

- Reduce coronary heart disease deaths to no more than 100 per 100,000 people.
- Reverse the rise in cancer deaths to achieve a rate of no more than 130 per 100,000 people.
- Reduce overweight to a prevalence of no more than 20 percent among people aged 20 and older and no more than 15 percent among adolescents aged 12-19.
- Reduce growth retardation among low-income children aged 5 and younger to less than 10 percent.

Risk Reduction

- Reduce dietary fat intake to an average of 30 percent of calories or less and average saturated fat intake to less than 10 percent of calories among people aged 2 and older. In addition, increase to at least 50 percent the proportion of people aged 2 and older who meet the *Dietary Guidelines*' average daily goal of no more than 30 percent of calories from fat, and increase to at least 50 percent the proportion of people aged 2 and older who meet the average daily goal of less than 10 percent of calories from saturated fat.
- Increase complex carbohydrate and fiber-containing foods in the diets of people aged 2 and older to an average of 5 or more daily servings for vegetables (including legumes) and fruits, and to an average of 6 or more daily servings for grain products. In addition, increase to at least 50 percent the proportion of people aged 2 and older who meet the *Dietary Guidelines*' average daily goal of 5 or more servings of vegetables/fruits, and increase to at least 50 percent the proportion who meet the goal of 6 or more servings of grain products.
- Increase to at least 50 percent the proportion of overweight people aged 12 and older who have adopted sound dietary practices combined with regular physical activity to attain an appropriate body weight.
- Increase calcium intake so at least 50 percent of people aged 11-24 and 50 percent of pregnant and lactating women consume an average of 3 or more daily servings of foods rich in calcium, and at least 75 percent of children aged 2-10 and 50 percent of people aged 25 and older consume an average of 2 or more servings daily.
- Decrease salt and sodium intake so at least 65 percent of home meal preparers prepare foods without adding salt, at least 80 percent of people avoid using salt at the table, and at least 40 percent of adults regularly purchase foods modified or lower in sodium.
- Reduce iron deficiency to less than 3 percent among children aged 1-4 and among women of childbearing age.
- Increase to at least 75 percent the proportion of mothers who breastfeed their babies in the early postpartum period and to at least 50 percent the proportion who continue breastfeeding until their babies are 5-6 months old.
- Increase to at least 75 percent the proportion of parents and caregivers who use feeding practices that prevent baby bottle tooth decay.
- Increase to at least 85 percent the proportion of people aged 18 and older who use food labels to make nutritious food selections.

Services and Protection

- Achieve useful and informative nutrition labeling for virtually all processed foods and at least 40 percent of ready-to-eat carry-away foods. Achieve compliance by at least 90 percent of retailers with the voluntary labeling of fresh meats, poultry, seafood, fruits, and vegetables.

- Increase to at least 5,000 brand items the availability of processed food products that are reduced in fat and saturated fat.

- Increase to at least 90 percent the proportion of restaurants and institutional food service operations that offer identifiable low-fat, low-calorie food choices, consistent with the *Dietary Guidelines for Americans*.

- Increase to at least 90 percent the proportion of school lunch and breakfast services and child care food services with menus that are consistent with the nutrition principles in the *Dietary Guidelines for Americans*.

- Increase to at least 80 percent the receipt of home food services by people aged 65 and older who have difficulty in preparing their own meals or are otherwise in need of home-delivered meals.

- Increase to at least 75 percent the proportion of the Nation's schools that provide nutrition education from preschool to 12th grade, preferably as part of comprehensive school health education.

- Increase to at least 50 percent the proportion of worksites with 50 or more employees that offer nutrition education and/or weight management programs for employees.

- Increase to at least 75 percent the proportion of primary care providers who provide nutrition assessment and counseling and/or referral to qualified nutritionists or dietitians.

In 1995, six objectives from other priority areas have been added to the Nutrition priority area, recognizing that diet can contribute to the prevention of these diseases.

Health Status

- Reduce stroke deaths to no more than 20 per 100,000 people.

- Reduce colorectal cancer deaths to no more than 13.2 per 100,000 people.

- Reduce diabetes to an incidence of no more than 2.5 per 1,000 people and a prevalence of 25 per 1,000 people.

Risk Reduction

- Reduce the prevalence of blood cholesterol levels of 240 mg/dL or greater to no more than 20 percent among adults.

- Increase to at least 50 percent the proportion of people with high blood pressure whose blood pressure is under control.

- Reduce the mean serum cholesterol level among adults to no more than 200 mg/dL.

Healthy People 2000: Progress on 47 sentinel objectives

Objective	Baseline[a]	Update[g]	Year 2000 targets	Right direction	Wrong direction	No change	No data
Health promotion							
1. Physical activity							
– more people exercising regularly	22%[c]	24%[j]	30%	X			
– fewer people never exercising	24%[c]	24%[j]	15%			X	
2. Nutrition							
– fewer people overweight	26%[b]	34%[h]	20%		X		
– lower fat diets	36%[b]	34%[h]	30%	X			
3. Tobacco							
– fewer people smoking cigarettes	29%	25%	15%	X			
– fewer youth beginning to smoke	30%	27%	15%	X			
4. Alcohol and other drugs							
– fewer alcohol-related automobile deaths (per 100,000)	9.8	6.8	8.5	X			
– less alcohol use among youth age 12–17 years	25.2%[e]	18.0%	12.6%	X			
– less marijuana use among youth age 12–17 years	6.4%[e]	4.9%	3.2%	X			
5. Family planning							
– fewer teen pregnancies (per 1,000)	71.1[c,r]	74.3[i,r]	50.0[r]		X		
– fewer unintended pregnancies	56%[e]	NA	30%				X
6. Mental health and mental disorders							
– fewer suicides (per 100,000)	11.7	11.2	10.5	X			
– fewer people reporting stress-related problems	44.2%[c]	39.2%	35%	X			
7. Violent and abusive behavior							
– fewer homicides (per 100,000)	8.5	10.3[k]	7.2		X		
– fewer assault injuries (per 100,000)	9.7[d]	9.9[k]	8.7		X		
8. Educational and community-based programs							
– more schools with comprehensive school health education	NA	NA	75%				X
– more workplaces with health promotion programs	65%[c]	81%[k]	85%	X			
Health protection							
9. Unintentional injuries							
– fewer unintentional injury deaths (per 100,000)	34.7	29.6	29.3	X			
– more people using automobile safety restraints	42%[e]	67%[l]	85%	X			
10. Occupational safety and health							
– fewer work-related deaths (per 100,000)	6[m]	5	4	X			
– fewer work-related injuries (per 100,000)	7.7[m]	7.9	6.0		X		
11. Environmental health							
– no children with blood lead 25 µg/dl	234,000[n]	93,000[h]	0	X			
– more people with clear air in their communities	49.7%[e]	76.5%	85%	X			
– more people in radon-tested houses	5%[f]	11.4%	40%	X			
12. Food and drug safety							
– fewer *salmonella* outbreaks	77[f]	63	25	X			
13. Oral health							
– fewer children with dental caries	54%	52%	35%	X			
– fewer older people without teeth	36%[d]	30%	20%	X			

Healthy People 2000: Progress on 47 sentinel objectives

Objective	Baseline[a]	Update[g]	Year 2000 targets	Right direction	Wrong direction	No change	No data
Preventive services							
14. Maternal and infant health							
– fewer newborns with low weight	6.9%	7.1%[k]	5%		X		
– more mothers with first trimester care	76.0%	77.7%[k]	90%	X			
15. Heart disease and stroke							
– fewer coronary heart disease deaths (per 100,000)	135	114[k]	100	X			
– fewer stroke deaths (per 100,000)	30.4	26.4	20.0	X			
– better control of high blood pressure	11%[b]	21%[h]	50%	X			
– lower cholesterol levels	213 mg/dl[b]	205 mg/dl[h]	200 mg%	X			
16. Cancer							
– decrease cancer deaths (per 100,000)	134	133	130	X			
– increase screening for breast cancer (age>50)	25%	55%	60%	X			
– increase screening for cervical cancer (age>18)	88%	95%	95%	X			
– increase fecal occult blood testing (age>50)	27%	30%[k]	50%	X			
17. Diabetes and chronic disabling conditions							
– fewer people disabled by chronic conditions	9.4%	10.6%	8%		X		
– fewer diabetes-related deaths (per 100,000)	38[d]	38[k]	34			X	
18. HIV infection							
– slower increase in HIV infection (per 100,000)	400[f]	NA	400				X
19. Sexually transmitted diseases							
– fewer gonorrhea infections (per 100,000)	300[f]	172	225	X			
– fewer syphilis infections (per 100,000)	18.1[f]	10.4	10.0	X			
20. Immunization and infectious diseases							
– no measles cases	3058[e,q]	312[q]	0	X			
– fewer pneumonia and influenza deaths (per 100,000)	19.9[o]	23.1[p]	7.3		X		
– higher immunization levels (age 19-35 months)	54-64%	67%	90%	X			
21. Clinical preventive services							
– financial barriers to recommended preventive services	16%[f]	17%	0		X		
Surveillance and data systems							
22. Surveillance and data systems							
– common and comparable health status indicators in use across States	0 States	48 States	40 States	X			
Total				**33**	**9**	**2**	**3**

[a] 1987 unless otherwise noted
[b] 1976-80
[c] 1985
[d] 1986
[e] 1988
[f] 1989
[g] 1993 unless otherwise noted
[h] 1989-91
[i] 1990
[j] 1991
[k] 1992
[l] 1994
[m] 1983-1987
[n] 1984
[o] 1979-80 through 1986-87 influenza seasons
[p] 1987-88 through 1989-90 influenza seasons
[q] Data are expressed as measles cases
[r] Rate per 1,000

NA = not available

...the prevalence of overweight among adults 20-74 years of age has increased from 26 percent in 1976-80 to 34 percent in 1988-91. Over the same period, the prevalence of overweight among adolescents increased from 15 to 21 percent.

Physical Activity and Fitness. Progress on physical activity and fitness objectives appears to be mixed. Objectives monitoring prevalence of regular moderate and vigorous physical activity among adults have shown a slight increase. However, there has been no change in the percentage of adults who state that they never exercise. Unfortunately, little information is available on the physical activity levels of children. Two objectives for which there are data, the percentage of students in grades 9 to 12 engaged in daily school physical education and the proportion of time that students spend being physically active, show declines, however.

Nutrition. Data indicate that the prevalence of overweight among adults 20-74 years of age has increased from 26 percent in 1976-80 to 34 percent in 1988-91. Over the same period, the prevalence of overweight among adolescents increased from 15 to 21 percent. This substantial movement away from the *Year 2000* target indicates that action is needed both to improve diets and to promote physical activity.

The average intake of dietary fat has declined from 36 percent of calories in 1976-80 to 34 percent in 1988-91. Numerous changes have taken place that may promote further dietary improvement. Since implementation of the Nutrition Labeling and Education Act in 1994, more understandable and useful food labels appear on most packaged foods. More lowfat foods are now available to consumers, a *Healthy People* objective for which the original target has now been surpassed. An increasing number of worksites now offer nutrition education, weight management, and/or physical fitness programs for employees.

Tobacco. Progress continues to be made in reducing cigarette smoking. The prevalence of cigarette smoking among the general adult population dropped to 25 percent in 1993. It continues to be considerably higher among some special population groups, including American Indians/Alaska Natives, blue-collar workers, and military personnel, however, indicating that special attention needs to be paid to these groups. The prevalence of smoking among adults 20-24 years of age, a proxy measure of youth initiation to smoking, dropped from 30 percent in 1987 to 27 percent in 1993. One objective in which there was movement in a negative direction was the percentage of female cigarette smokers who quit during pregnancy. Compared with 39 percent who quit in 1985, only 31 percent quit in 1991.

Alcohol and Other Drugs. One of the most dramatic areas of improvement is the reduction of alcohol-related automobile deaths. The reduction by 1993 to 6.8 deaths per 100,000 people exceeded the *Year 2000* target of 8.5 deaths per 100,000. Major factors in achieving this success have been the passage and enforcement of stricter laws regulating alcohol-related driving issues by many States.

In general, alcohol use appears to be on the decline. Annual per capita alcohol consumption in the United States dropped from 2.54 gallons in 1987 to 2.31 gallons in 1991. Alcohol and marijuana use declined by 29 and 23 percent respectively between 1988 and 1993 among adolescents ages 12-17 years, based on data from the National Household Survey of Drug Abuse.

Family Planning. No recent data are available on the reduction of unintended pregnancies in the general female population. Among adolescents, a high-risk group identified for special attention, the movement appears to be away from *Year 2000* targets. Despite prevention efforts such as sex education, abstinence education, life skills education, and contraceptive services programs, adolescent pregnancies continue to increase, rising from 71.1 per 1,000 females in 1985 to 74.3 per 1,000 in 1990. Sexual activity among young teens also continues to increase. Among 15-year-old females, 36 percent reported being sexually active in 1991 compared with 27 percent in 1988, based on data from the Youth Risk Behavior Surveillance System.

Mental Health and Mental Disorders. Suicide rates have declined from 11.7 per 100,000 people in 1987 to 11.2 per 100,000 in 1993. One contributing factor may be the increase in persons seeking treatment for depression (one of the strongest risk factors for suicide) and other mental problems. More employers are offering worksite programs to reduce employees' stress. The percentage of adults who report experiencing adverse health effects from stress has declined from 44.2 percent in 1985 to 39.2 percent in 1993.

Violent and Abusive Behavior. The United States ranks first among industrialized nations in violent death rates, and unfortunately, recent data indicate that the trend to increasing mortality and morbidity resulting from violent behavior is continuing. Deaths from homicide have increased from 8.5 persons per 100,000 in 1987 to 10.3 per 100,000 in 1992. The Centers for Disease Control have predicted that if current mortality trends continue, the death rate from firearms will surpass that from motor vehicle crashes in the United States by the year 2003. Injuries from assault have also increased from 9.7 persons per 100,000 in 1986 to 9.9 per 100,000 in 1992.

Educational and Community-Based Programs. A major area of success has been the rise in workplaces offering health promotion programs on such topics as physical fitness, stress management, and nutrition and weight management. The proportion of workplaces offering programs has risen from 65 percent in 1985 to 81 percent in 1992, almost reaching the *Year 2000* target of 85 percent. For schools, another potential site for health promotion, there are currently no data on the number offering comprehensive health education.

Unintentional Injuries. Deaths from unintentional injuries have dropped from 34.7 per 100,000 in 1987 to 29.6 per 100,000 in 1993, approaching the *Year 2000* target. One major factor in this decline has been the decrease in motor vehicle traffic fatalities, which may, in turn, be partly attributable to increased use of automobile safety restraints. Currently, two-thirds of Americans use automobile safety restraints, and one State, Hawaii, has met the *Year 2000* target of 85 percent of individuals using safety restraints.

Occupational Safety and Health. While work-related injury deaths have been reduced to 5 per 100,000 workers in 1993, nonfatal injuries at work have increased slightly. In particular, repetitive trauma injuries, such as carpal tunnel syndrome, have increased. This increase may reflect the changing nature of the workplace—a rise in automation—as well as heightened awareness and improved reporting.

Environmental Health. One of the most important improvements in environmental health has been the reduction in the number of children with elevated blood lead levels from 234,000 in 1984 to 93,000 in 1989. Factors contributing to this improvement include increased use of unleaded gasoline, virtual elimination of U.S. manufactured food and drink cans containing lead solder, a ban on leaded paint and lead-containing solder for residential use, and the implementation of lead poisoning prevention programs by several States and cities.

Implementation of the Clean Air Act of 1990 has helped increase the proportion of people living in counties that meet EPA standards for air pollution from 49.7 percent in 1988 to 76.5 percent in 1993. Some progress has been made on reducing exposure to radon, with the percentage of people whose homes have been tested for radon increasing from less than 5 percent in 1989 to 11.4 percent in 1993.

Food and Drug Safety. Progress has been made in reducing *Salmonella* outbreaks from 77 during 1989 to 63 in 1993. National data for tracking infections caused by *E. coli O157:H7*, the bacteria responsible for a multi-State outbreak of food poisoning in 1993, are not currently available. The 1992-93 Food and Drug Administration Food Safety Survey found improvements in household practices such as promptly refrigerating perishable foods.

Oral Health. The oral health of Americans continues to improve. The percentage of children with dental caries declined from 54 percent in 1987 to 52 percent in 1993. The proportion of people 65 years and over with complete tooth loss declined from 36 percent in 1986 to 30 percent in 1993.

Maternal and Infant Health. Although infant mortality rates have improved, the prevalence of low birthweight has increased, with 7.1 percent of babies born weighing less than 5.5 pounds in 1992. The number of babies born with Fetal Alcohol Syndrome has also increased, from 0.22 per 1,000 live births in 1987 to 0.67 per 1,000 in 1993, although this may be at least partly a function of changes in reporting.

More mothers are receiving prenatal care in the first trimester, although Black, Native American, and Hispanic mothers are less likely than other mothers to receive care in the first trimester. The percent of mothers breastfeeding has increased—56 percent in 1993, compared with 54 percent in 1988.

Heart Disease and Stroke. Over the past 25 years, death rates from coronary heart disease and stroke have declined by 49 percent and 58 percent, respectively, and current data indicate that the decline in mortality is continuing. Improvements in control of cardiovascular risk factors have accompanied this decline. Blood cholesterol levels have dropped and control of high blood pressure has improved. These changes seem to be attributable, at least partly, to dietary and lifestyle change, as well as earlier screening, detection, and treatment.

Cancer. Cancer deaths have declined slightly from 134 per 100,000 people in 1987 to 133 per 100,000 in 1993. One major area of improvement has been increased screening for detection of such common types of cancer as breast cancer, cervical cancer, and colon cancer (fecal occult blood testing).

Diabetes and Chronic Disabling Conditions. The proportion of people disabled by such chronic conditions as back problems, asthma, and hearing or visual impairment has increased from 9.4 percent in 1987 to 10.6 percent in 1993. There has been no change in the prevalence of diabetes-related deaths or of most diabetes-related complications, although there has been a reduction in lower extremity amputations among people with diabetes.

HIV Infection. Data are not currently available to evaluate progress on the *Year 2000* target of slowing the increase in HIV infection. In general, the nature of the HIV disease—with its relatively long incubation period between infection and symptoms—creates problems for tracking the progress of AIDS prevention efforts: most of the people who will be diagnosed as having AIDS between now and the year 2000 already have been infected. Some prevention-oriented objectives show progress, including increased condom use by sexually active unmarried people, the increased percentage of injecting drug users in drug abuse treatment or using uncontaminated drug paraphernalia, and the increased safety of blood supply.

Sexually Transmitted Diseases. Rates of nearly all sexually transmitted diseases are declining. Both gonorrhea and syphilis are declining in prevalence, with syphilis rates almost meeting the *Year 2000* target. The rate of decline, however, is not as great among minorities.

Immunization and Infectious Diseases. The number of reported measles cases declined from 3,058 in 1988 to 312 in 1993. The prevalence of numerous other infectious diseases, including mumps, rubella, diphtheria, and poliomyelitis, has declined, and the proportion of young children who have received age-appropriate immunizations has increased. The introduction of a new vaccine reduced the incidence of Haemophilus influenza meningitis by 95 percent. Deaths from pneumonia and influenza among adults 65 years and over have increased from 19.9 per 100,000 people in 1979-87 to 23.1 per 100,000 in 1987-90, despite increased immunization levels for these illnesses among older adults. Another area of concern is the rise in the prevalence of tuberculosis, especially among minorities, as well as the decline in the proportion of tuberculosis patients who complete therapy to prevent further spread of the disease.

Clinical Preventive Services. This area encompasses such services as immunizations, screening tests for early detection of disease, and patient education and counseling. In addition to being clinically effective and having a positive impact on quality of life, preventive services have a strong probability of being cost-effective. Therefore, the increase in the percentage of people under 65 years old without health care coverage—from 16 percent in 1989 to 17 percent in 1993—is a concern.

Surveillance and Data Systems. One problem in assessing the health status of Americans and progress toward improvement has been shortcomings in available data and the lack of comparable data across States. In 1991, CDC/NCHS released a consensus set of 18 health status indicators. Forty-eight States were using the indicators in 1993, thus allowing comparability of information across States.

New Objectives

As a part of the midcourse review process, new objectives that reflect scientific developments, changes in health concerns, or new strategies for health promotion have been added to the existing *Healthy People 2000* objectives. Some of these changes reflect advances in knowledge that make it possible to prevent or control health problems that previously were less amenable to treatment.

Several major studies published since 1990 have demonstrated that adequate intake of folic acid by women of childbearing age was associated with reduced risk of giving birth to a child with neural tube defects (e.g., spina bifida or anencephaly). Therefore, the Public Health Service published a recommendation in 1992 that all women capable of becoming pregnant consume 400 micrograms of folic acid daily. Because of this new information on how neural tube defects may be reduced, a new Maternal and Infant Health objective to reduce the incidence of spina bifida and other neural tube defects has been added.

Two new objectives reflecting new scientific knowledge have been added to the Diabetes and Chronic Disabling Conditions priority area. With the identification of the bacterium *Helicobacter pylori* as a cause of recurrent and chronic peptic ulcer disease, effective therapies have been developed to eradicate the bacteria and prevent the recurrence of peptic ulcer disease. Consequently, a new objective to reduce the prevalence of peptic ulcer disease by preventing its recurrence has been added. Other recent studies indicate that about 90 percent of diabetes-caused blindness could have been avoided through improved detection and treatment. Therefore, a new objective to increase the number of people with diabetes receiving annual eye exams that would detect treatable retinopathy has been added.

The growth of homicide as a leading cause of fatal injury to workers has prompted the addition of an objective to reduce deaths from work-related homicides to the Occupational Safety and Health Priority Area. In the area of Violent and Abusive Behavior, an objective calling for all States to enact laws requiring proper storage of firearms has been added.

Several new objectives seek to employ new strategies to control health problems. In the Tobacco Priority Area, new objectives have been added that advocate increasing taxes on tobacco products to discourage smoking and increasing the proportion of health plans that offer treatment for nicotine addiction. In the Unintentional Injuries priority area, one new objective calls for extending, to all States, laws requiring helmets for bicycle riders; and a second objective aims to increase the number of States having a graduated driver licensing system for drivers and motorcycle riders under the age of 18. In the area of controlling HIV Infection, a new objective has been added to increase the proportion of businesses offering an HIV/AIDS workplace program.

In the area of Food and Drug Safety, a new objective has been added that takes advantage of MedWatch, the FDA Medical Products Reporting Program developed in 1993. It seeks to increase the proportion of adverse event reports voluntarily sent to FDA by health professionals via this program. A second drug safety objective would increase the proportion of people receiving information on new prescriptions from prescribers or dispensers.

In addition to these completely new objectives, several pre-existing objectives have been modified to include a new emphasis on population subgroups of particular concern. These changes reflect both the ongoing concern about health disparities in America and the growth of more detailed information on health characteristics of specific population subgroups.

Continuing Progress

At the mid-point of the *Healthy People 2000* initiative, appropriate strategies for continuing progress toward the *Year 2000* goals and objectives must also be considered. The initiative has employed a broad-based approach toward accomplishment of its aims, with State and local communities, as well as private organizations, playing important roles in the development and implementation of intervention programs and strategies. Today, most States have developed their own disease prevention and health promotion objectives as a means of setting public health priorities and as a framework for developing and supporting legislation. To continue making progress toward the *Year 2000* targets, this broad-based approach—with interventions at the family, school, worksite, and community levels—must be continued.

Source: U.S. Department of Health and Human Services, Public Health Service, *Healthy People 2000 Midcourse Review and 1995 Revisions.*

Total and Per Capita Personal Income by State and Region

In 1994, total personal income in the Nation increased 5.9 percent after increasing 4.4 percent in 1993. Earnings increased faster in 1994 than in 1993 in all major industries except the Federal Government.

Per capita personal income in the Nation increased 4.9 percent in 1994 after increasing 3.3 percent in 1993 and 4.9 percent in 1992. The increases in per capita income have exceeded the increases in U.S. prices (as measured by the fixed-weighted price index for personal consumption expenditures) for 3 consecutive years. In 1994, prices increased 2.4 percent, the smallest increase since 1966. By State, increases in per capita income in 1994 exceeded or equaled 2.4 percent in all 50 States.

In 12 States (indicated in dark gray in the figure), increases in per capita personal income were at least 1.0 percentage point higher than the national average. Eleven of these States had below-average increases in population (see table).

Per capita personal income: Percent change, by State and region, 1993-94

Source: Tran, D.D. and Friedenberg, H.L., 1995, Total and per capita personal income by State and region, Survey of Current Business 75(4):58-61.

Per capita personal income for selected States and the United States, 1993-94

Rank		Percent change	
		Per capita personal income	Population
	Fastest growing States:		
1	Iowa	10.9	0.3
2	South Dakota	9.5	.7
3	North Dakota	8.6	.2
4	Michigan	8.5	.4
5	Mississippi	7.4	1.1
6	Minnesota	7.0	.9
7	West Virginia	6.4	.2
8	Ohio	6.3	.4
9	Louisiana	6.3	.6
10	Wisconsin	6.1	.7
11	Indiana	6.1	.8
12	Missouri	5.9	.8
	United States	**4.9**	**1.0**
	Slowest growing States:		
43	Colorado	3.9	2.6
44	Washington	3.8	1.6
45	Texas	3.7	2.0
46	Wyoming	3.6	1.3
47	Alaska	3.1	1.4
48	Montana	2.8	1.8
49	California	2.7	.7
50	Hawaii	2.4	1.1

Above-average increases in farm income, earnings in both durables and nondurables manufacturing, and in retail trade boosted personal income growth in Iowa, South Dakota, North Dakota, Minnesota, and Missouri.

In Michigan, Ohio, Wisconsin, and Indiana, personal income growth was boosted by above-average increases in earnings in durables manufacturing, in transportation and public utilities, in retail trade, and in government.

In Mississippi, West Virginia, and Louisiana, above-average increases in earnings from farm income, construction, mining, transportation and public utilities, services, and government led to above-average increases in per capita personal income.

In eight States (indicated in light gray in the figure), increases in per capita personal income in 1994 were at least 1.0 percentage point less than the U.S. average. Seven of these States had below-average increases in personal income; seven had above-average increases in population (see table).

In Washington, Texas, Wyoming, and Montana, personal income growth was slowed by declines in farm income. In Alaska, California, and Hawaii, declines in nondurables manufacturing, private service-type industries except retail trade, and government caused personal income growth to lag behind national figures. Cutbacks in defense-related industries in California and earnings declines in the construction and finance/insurance/real estate industries in Hawaii were responsible.

Source: Tran, D.D. and Friedenberg, H.L., 1995, Total and per capita personal income by State and region, *Survey of Current Business* 75(4):58-61.

Home Health Care

Home health care has become the fastest growing segment of the health services industry. Expansion of medicare benefits, lower costs for care at home relative to hospital care, and modern technology have contributed to this growth. Although home health care is not a replacement for all hospital services, it has become an important setting for delivering preventive, diagnostic, therapeutic, rehabilitative, and long-term maintenance services.

According to employment data from the Current Employment Statistics survey, one in five jobs created in the nonfarm economy since January 1988 has been in the health services industry. Within health services, employment in home health care has risen by 168 percent (or 345,000 additional jobs). In contrast, employment in hospitals has increased by 18 percent—580,000 additional jobs (see table). Since health services are always in demand, the health care industry is recognized for its strength in bad times as well as good. For example, during the most recent employment recession, June 1990 through February 1992, employment in the health services industry grew 7.5 percent while employment in the total nonfarm economy fell 1.7 percent. During the first 3 years of the recovery period following this recession, home health care had the third largest increase of all industries, following mortgage bankers and brokers and title insurance.

Employment change in health services, 1988 and 1994

Industry	Percent of health services employment		Employment change	
	January 1988	October 1994	Percent	Level
				(thousands)
Total	100.0	100.0	31	2,163
Hospitals	46.3	41.6	18	576
Physicians	16.9	17.3	35	406
Nursing and personal care facilities	18.6	18.1	27	350
Home health care	3.0	6.0	168	345
Practitioners	3.1	4.4	88	187
Dental offices	6.9	6.6	25	121
Osteopaths and n.e.c.	3.3	3.7	48	109
Laboratories	2.0	2.3	45	64

Note: Data are seasonally adjusted.
n.e.c. - not elsewhere classified.

Source: Freeman, L., 1995, Home-sweet-home health care, Monthly Labor Review 118(3):3-11.

Home Health Care Profile

Home health care services, as defined in the *Standard Industrial Classification Manual 1987,* are "establishments primarily engaged in providing skilled nursing or medical care in the home, under the supervision of a physician." Services range from helping with basic activities of daily living to caring for patients needing specialized care for AIDS or cancer chemotherapy. Time with the patient can range from 1 hour a week to around-the-clock care.

According to the Occupational Employment Statistics survey, home health aides[1] are the most common providers of care to individuals at home, accounting for 31 percent of the industry. Various professional health providers make up 32 percent, of which 20 percent are registered nurses, and 7 percent are licensed practical nurses. Personal and home care aides[2] account for 13 percent, and the remainder is comprised of other specialized personnel such as physical therapists, social workers, and speech pathologists.

[1]Home health aides have been defined by the Occupational Employment Statistics survey as those who care for elderly, convalescent, or handicapped persons in the home of the patient. They perform duties for patients such as changing bed linens, preparing meals, assisting in and out of bed, bathing, dressing, and grooming, and administering oral medications under a doctor's orders or at the direction of a nurse.

[2]Personal and home care aides have been defined by the Occupational Employment Statistics survey as those who perform a variety of tasks at places of residence. Their duties include keeping a house and advising families with problems such as nutrition, cleanliness, and household utilities.

The Impact of Medicare

During the early 1980's, the Health Care Financing Administration imposed restrictions on coverage of home health care by medicare. Reimbursement for home care that was provided for more than 4 days a week—no matter how little time was involved—was denied. A lawsuit was filed and the care was certified as a class action suit, requiring the government to reopen all medicare claims from patients whose benefits were denied—estimated to number hundreds of thousands of individuals. As a result of the decision, medicare now allows payment of part-time (fewer than 8 hours a day) or daily (7 days-a-week) home health care services for as long as the patient requires such care. The change in medicare benefits allows more individuals to be covered by home health care services. Before the lawsuit, approximately 1.5 million enrollees received home health services from medicare-certified agencies. By the end of 1993, about 3.5 million received these benefits, an increase of more than 218 percent.

Employment in home health services grew 21 percent in 1990, the first full year in which the new guidelines were in effect. Since 1990, the gains in the industry have averaged 16 percent annually. The number of medicare-certified home health agencies has increased by nearly 22 percent over the past 5 years; most of the increase occurred in 1993 when nearly 7,000 medicare-certified home health agencies and a little more than 6,000 noncertified agencies provided service. Agencies that have remained outside of medicare may not be providing skilled nursing care or they may choose to restrict business to private-pay patients.

Cost Effectiveness

For financial reasons, hospitals find it expedient to discharge patients as soon as medically possible. The services provided immediately following discharge have become an increasingly significant component of patient care. Cost savings result from the lower overhead expenses and flexible staffing practices of the home health care company. High-cost institutional care is replaced by professional care and personal care, which is often provided by family or friends. Data from the Current Employment Statistics survey show that the average hourly earnings for workers in the home health care industry is more than $3 less than that for those in the hospital industry, $10.67 compared with $14.

Also, in an institutional setting, a registered nurse or doctor may visit all patients three times a day, while home care rounds are based on the needs of the patient and his or her family. The frequency of the visits is determined by the patient's condition and the ability of the patient and the family to learn how to provide care themselves, with the goal being self-sufficiency.

Technological Advances

When planning for home health care, a major concern is whether the treatment at home will be comparable to institutional care. Recent technological advances have made complex medical equipment more compatible with the home environment. Lab tests are now available curbside from vans that perform lab work on site.

One of the most rapidly growing areas of medical technology is the engineering and production of medical equipment tailored for use in the home. Such equipment includes blood glucose monitoring for the diabetic, computerized equipment for the disabled, and mini-intensive care units with ventilators and central venous lines. Employment in the medical instruments and supplies industry has increased by 17 percent since January 1988.

A new generation of hardware, software, and fiber-optic, digital cable networks is attracting attention from hospitals, physicians, and clinics in both urban and rural areas. This technology enhances home health care by enabling hospital staff and physicians to monitor patients in their homes via telephone lines.

Increased Public Awareness

Recently, the public has become more aware of the home health care industry. Change in the structure of families has contributed to this awareness. With increasing numbers of women in the work force—59 percent, up from 56 percent in 1988—fewer family members are at home to help sick or elderly patients who may need sophisticated care.

Use of home health care services is dependent on many factors including the patient's health care needs, the type of reimbursement plan, and the physician's willingness to prescribe home care. Home health care cannot be obtained without a physician's prescription, so the physician, who makes specific recommendations and referrals, plays a significant role in deciding whether to use home care services.

A 1991 study, "Physicians' Attitudes and Behaviors Toward Home Health Care Services," addressed the importance of physicians' insights into the strengths and weaknesses of the home

health care industry. The survey concluded that 90 percent of the physician sample regarded home health care services and programs favorably, while 3 percent regarded them unfavorably. As physicians become more involved with home care, they will require wider use of technological improvements and other forms of innovation and education. Approximately 82 percent of all accredited medical schools offered home health care in their 1992 curricula.

The Future

The expansion of medicare benefits brought about by policy changes in the late 1980's had a major impact on employment in the home health care industry. In the absence of other policy changes, this trend will most likely continue. Improved cost-effectiveness, advancing technology, and increased public awareness will continue to strengthen the industry.

Employment in the home health industry is projected to increase by more than 500,000 jobs, or 128 percent, between 1992 and 2005. This compares with an expected increase of only 30 percent in the hospital industry and 43 percent for total health services.

The need for personal assistance and health care—specifically home health care—increases with age. As the size of the elderly population increases, the numbers requiring home health care should greatly increase, also. Aging baby boomers will cause the elderly population to expand from 39.7 million in 2010 to 69.8 million in 2030, when more than 20 percent of the population will be 65 years and older.

Source: Freeman, L., 1995, Home-sweet-home health care, *Monthly Labor Review* 118(*3*):3-11.

Health Needs of Young Children in Foster Care

Foster children are among the most vulnerable individuals in the welfare population. Of particular concern is the health of young foster children since conditions left untreated during the first 3 years of life can influence functioning into adulthood and impede a child's ability to become self-sufficient later in life. Yet, little comprehensive information is available about the provision of health-related services to meet the needs of young foster children. This report provides information on (1) the health-related services needed and received by young children in foster care, (2) the relationship between the receipt of health-related services and foster care placements with relatives versus placements with nonrelatives, and (3) what responsible agencies are doing to ensure that these children are receiving needed health-related services.

To develop this information, the General Accounting Office (GAO) reviewed foster care programs in California, New York, and Pennsylvania—the States with the largest average monthly foster care populations in 1991. In addition, random samples of case files from Los Angeles County, New York City, and Philadelphia County from a combined population of 22,755 young foster children were analyzed. These locations cared for a substantial portion of each State's young foster children. Findings reported here are based on cases from only these three locations.

Results indicated that a significant proportion of young foster children in Los Angeles County, New York City, and Philadelphia County did not receive critical health-related services. Despite State and county foster care agency regulations requiring comprehensive routine health care, an estimated 12 percent of young foster children received no routine health care, 34 percent received no immunizations, and 32 percent had at least some identified health needs that were not met. Furthermore, an estimated 78 percent of young foster children were at high risk for human immunodeficiency virus (HIV) as a result of parental drug abuse, yet only an estimated 9 percent of young foster children were tested for it.

Case files did not always reflect the exact nature or extent to which services were provided. Thus, children noted as having received routine medical care may have received as little care as one visit with a physician for treatment of a minor illness rather than comprehensive or ongoing medical care.

States must offer Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) services to medicaid-eligible children. EPSDT services are specific, comprehensive medical examinations and follow-up treatment; however, only an estimated 1 percent of the young foster children in the locations reviewed received them.

Children with no known health problems were less likely to receive routine care than children who were at risk for or had serious health problems. Of the children with no known serious health problems, an estimated 28 percent did not receive any health-related services.

By comparison, only 6 percent of children who were at high risk for serious health problems because of prenatal drug exposure and 2 percent of children with serious physical health problems did not receive any health-related services.

Although young foster children received a wide variety of services from health care providers, many children had identified health-related needs that were not met. GAO used information collected from case files to identify the health-related needs of each child and to match them with the services received. About one-third of the children had some identified needs that were not met. These unmet needs included pulmonary and speech therapy; psychotherapy; developmental assessments; infant stimulation services; cardiological, urological, and neurological examinations; and testing for sickle cell anemia, syphilis, and HIV.

Young foster children placed with relatives were less likely than children placed with nonrelatives to receive health-related services of all kinds. Also, children placed in kinship care were nearly three times as likely as those placed in traditional foster care to have received no routine health care. Since studies indicate that children in kinship care remain in foster care longer, and they receive a lower level of service, these children are likely to go without needed services for longer periods.

More and more, young foster children are being placed with relatives. In California and New York—the States where placement data were available—the number of young children placed with relatives increased by 379 percent between 1986 and 1991, while the number of young children placed with nonrelative foster parents increased by 54 percent. Consequently, whereas 20 percent of young foster children were placed with relatives in 1986, 43 percent of them were placed with relatives in 1991.

Young children placed in kinship care in Los Angeles County and New York City were three times more likely than those placed in traditional foster care to be at risk for future problems because of prenatal drug exposure. Furthermore, because drug-exposed children are more likely to be at risk for HIV and developmental delays, the need for health-related services for children in kinship care is even more critical. Yet, only 11 percent of children placed exclusively in kinship care received specialized examinations, such as developmental evaluations, compared with 42 percent of those placed exclusively in traditional foster care.

The Department of Health and Human Services (HHS) recently contracted for 10 National Resource Centers to assist its Administration for Children and Families (ACF) in responding to States' questions and in providing free technical assistance. None, however, is designated to assist States with health-related programs for foster children. Furthermore, while ACF audits States for compliance with federally mandated safeguards for foster children, these audits omit review of compliance with health-related safeguards. Therefore, when a State has passed its compliance audit, it is entitled to receive the full Federal child welfare funding available by law; because health-related safeguards are not included in the audit, States have no Federal financial incentive to comply with them.

Local foster care agencies continue to revise health-related policies, regulations, and programs in efforts to improve the delivery of health care to foster children. Given the importance of health care during the first 3 years of life, an improved response to the health needs of this vulnerable population is vital.

Source: U.S. General Accounting Office, 1995, *Foster Care: Health Needs of Many Young Children Are Unknown and Unmet*, Report to the Ranking Minority Member, Subcommittee on Human Resources, Committee on Ways and Means, House of Representatives, GAO/HEHS-95-114.

Effects of Intermittent Labor Force Attachment on Women's Earnings

Women who interrupt their careers and leave the labor market for family responsibilities often return to find that their wages lag behind those of women at comparable stages in their careers who did not leave the labor force. Many reasons account for this lag. First, women who leave the labor force and later re-enter do not build up seniority, with associated higher wages. Second, women who return to the labor force are less likely to receive on-the-job training to increase their productivity and thereby raise their pay. Third, when women are not in the work force, their job skills may decline. Finally, employers may view gaps in work history as an indication that women may leave again. Some employers would, therefore, hire them for less important, lower paying jobs to limit the impact of a future leave.

This study calculates the cost of taking a break from work in terms of the wage difference between women who work continuously and women who take one or more leaves. Because those who do not leave the work force tend to be younger and better educated than those who do, a straight-forward comparison cannot be made—foregone earnings would be overestimated.

Characteristics of women who remained in the labor force (no gaps) and women who left the labor force (1 or more gaps)

Item	Women who remained in the work force (no gaps)	Women who left the work force (1 or more gaps)
Number of people	696	1,730
Age	39	45
Years of education	14	12
Total years worked	17	17
	Percent	
Education		
No high school diploma	6	21
High school diploma	33	47
Some college	27	19
College degree	15	7
Graduate work	19	6
Occupation		
Professional/executive	38	21
Service occupations	10	17
Craft occupations	2	3
Pink collar/blue collar	50	59
Marital status		
Married	58	70
Widowed	3	5
Divorced	21	21
Never married	18	4
Number of children ever born		
None	39	9
1	18	14
2	24	33
3 or more	19	44

Source: Jacobsen, J.P. and Levin, L.M., 1995, Effects of intermittent labor force attachment on women's earnings, Monthly Labor Review 118(9):14-19.

Previous studies of gaps in labor force participation have found that these gaps affect earnings. One hypothesis is that women returning to the work force who find their wages lower than they had expected are quite likely to leave again; and over time only the relatively high-earning women who have had a break in labor force participation will be left in the work force. Another hypothesis is that earnings will rebound soon after women re-enter the work force.

This study tests for the rebound effect by restricting the sample of women with labor force breaks to those women who display continuous labor force attachment for an extended period after a break. Findings indicate that when women re-enter the labor market, their earnings are much lower than those of a comparable group of women who did not leave the labor market. Over time, that difference diminishes (due to the rebound effect) but never disappears, even after as long as 20 years.

Data used were from the 1984 panel of the Survey of Income and Program Participation. Each individual in the data set was interviewed eight times at 4-month intervals. Participants were asked in each interview about their labor force participation in the previous 4 months. Thus, data for 32 consecutive months for each individual (June 1983 to April 1986) were collected. Only women ages 30 to 64 at the start of the sample period were included.

Only women who worked relatively continuously during the 32 months of the sample were included in the "no gap" group; women must have reported earnings in the 1st, 6th, 12th, 18th, 24th, and 32d months of the sample. Thus, women were included only if their gaps were shorter than 6 months. In this way, the majority of women who have seasonally intermittent work schedules, such as teachers, participated in the "no gap" group.

To be included among the sample of women with labor force breaks ("gaps"), a woman must have taken at least one break from work, lasting 6 months or longer, between the year she received her last educational degree and the beginning of the survey.[1]

Total work experience was the same for the two groups (see table), which reflects the higher age and lower educational attainment of the women who left the work force. These women were much more likely to be working part time and were more heavily represented in less skilled and service occupations—both blue- and pink-collar positions.

[1]Includes women who worked before taking a break, and women who had an initial gap between the year of their last degree and the year in which they started working.

To illustrate the cost of taking an employment gap for a particular case, assume a woman with the following characteristics: graduates college at age 21, immediately begins full-time work (40 hours a week, 50 weeks a year) in a pink-collar occupation in a city outside the South. She leaves work at age 25 for 7 years and re-enters full-time work in 1984 at age 32. The difference between her earnings for the 20 years after she re-enters and what they would have been had she remained constantly employed is $52,000. Part of this is caused by her fewer years of experience; part is due to her decision to leave the labor force. This amount is equal to 15 percent of her prospective earnings had she worked constantly—or about 3 years of wages. Thus, the cost of taking a 7-year gap is 10 years of earnings.

Women who left the work force were more likely than their counterparts who remained in the work force to be married and to have children. The reason mentioned most often for taking leave from the work force was family reasons (85 percent gave this response). Other reasons included poor health and inability to find a job; leaving work to attend school was not counted as a gap.

Regression analysis was used to show the direct effects on wages of gaps occurring at different times in the past and to calculate wage ratios that control for differences in age, education, work experience, and other factors between those who had left the work force and those who remained at work. The regression equation was estimated at three different times during the sample period: the 1st, 18th, and 32d months. The dependent variable was the natural logarithm of the hourly wage. Independent variables controlled for individual characteristics (age, geographic location, occupation class, and human capital) and also a set of dummy variables for number of years since a worker ended her last absence from the labor force (measured from the beginning of the survey). Thus, the wages of the same

group of women could be measured and examined to determine what changes occurred over the duration of the survey.

A lasting negative effect and a gradual rebound effect resulted from the period out of the labor force. For any particular length of time out of the labor force, 2-1/2 years of continuous labor force attachment will, on average, diminish the difference in wages between those who have left the work force and those who remained. For example, in the initial period, women whose gaps ended less than 1 year ago had wages that were 33 percent lower than those of women who did not leave the labor force. By the third year (when they would have returned to the work force more than 3 years ago), these women's wages were only 20 percent lower than those of women who remained in the labor force.

Although there is strong evidence for a partial rebound effect, the wages of women who have taken a leave from the labor market never catch up to the wages of women who never left. Even women whose labor force gap occurred more than 20 years ago still earn between 5 and 7 percent less than women who never left the labor force and have comparable levels of experience.

The effect of a gap on a woman's lifetime earnings is significantly larger than just her foregone wages during the time away from work. This finding has significant implications for the way in which compensation between husband and wife is calculated in divorce proceedings.

Source: Jacobsen, J.P. and Levin, L.M., 1995, Effects of intermittent labor force attachment on women's earnings, *Monthly Labor Review* 118*(9)*:14-19.

Would you like to publish in *Family Economics and Nutrition Review?*

Family Economics and Nutrition Review will consider for publication articles concerning economic and nutritional issues related to the health and well-being of families. We are especially interested in studies about U.S. population groups at risk—from either an economic or nutritional perspective. Research may be based on primary or secondary data as long as it is national or regional in scope or of national policy interest, and articles may use descriptive or econometric techniques. Manuscripts may be mailed to: Joan C. Courtless, Editor, Center for Nutrition Policy and Promotion. See guidelines for complete address.

Guidelines for Authors

Family Economics and Nutrition Review is a peer-reviewed quarterly published by the Center for Nutrition Policy and Promotion; Food, Nutrition, and Consumer Services; U.S. Department of Agriculture.

Family Economics and Nutrition Review follows the guidelines of the *Publication Manual of the American Psychological Association*, Fourth Edition.

1. Manuscripts may not be submitted elsewhere while under consideration by the *Review*.

2. To ensure anonymity, include a separate title page with author's full name, title, affiliation, full address, and telephone number. There should be no reference to the authors in the text or footnotes.

3. Manuscripts should be double-spaced, on 8-1/2" x 11" paper, have 1-1/4" margins, and use 10 or 12 pitch type size.

4. Manuscripts should include an abstract of no more than 150 words.

5. Abstract, text, references, tables, and figures should not exceed 30 pages.

6. Each table or figure should be placed on a separate page.

7. Upon acceptance, authors must send a 3-1/2" computer disk copy of the final accepted version of the manuscript in WordPerfect 5.1 or lower. Disks and manuscripts will not be returned.

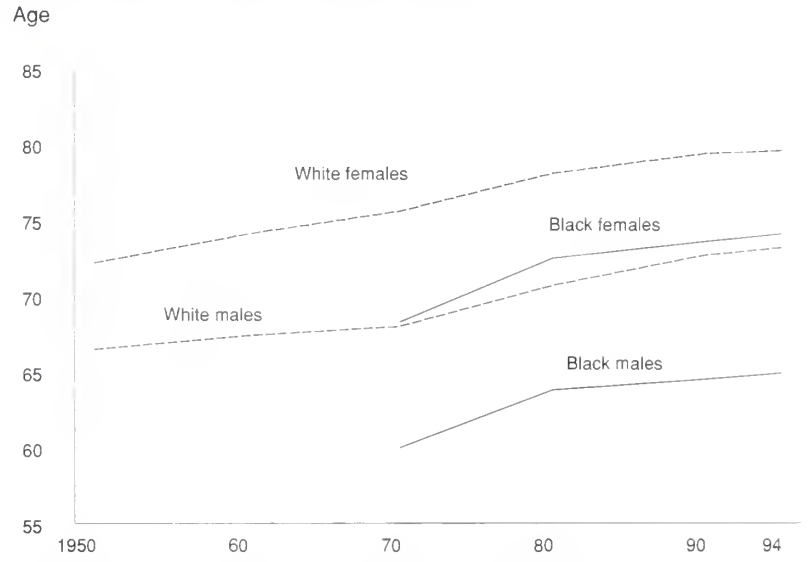
8. All authors and coauthors must sign a release acknowledging that contents of the *Review* are in the public domain.

9. Please send four copies to:

   Joan C. Courtless, Editor
   Family Economics and Nutrition Review
   USDA, Center for Nutrition Policy and Promotion
   1120 20th Street, NW, Suite 200 North Lobby
   Washington, DC 20036
   (202) 606-4816

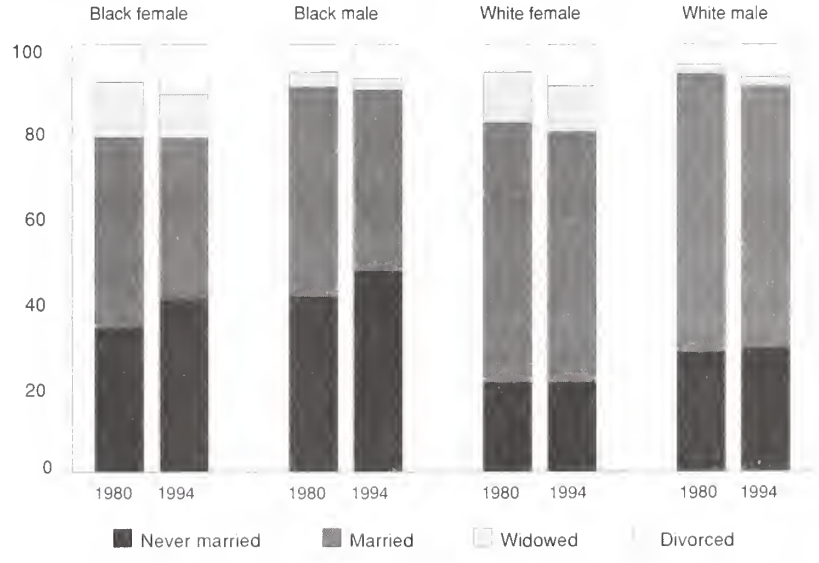
Charts From Federal Data Sources

Average length of life in years, by race and sex: United States



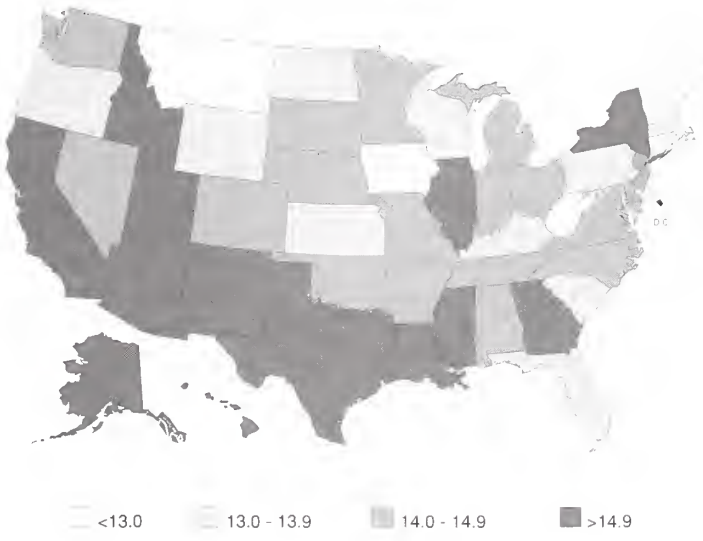
Source: U.S. Department of Health and Human Services, National Center for Health Statistics, 1995, Monthly Vital Statistics Report 43(13):17, table 7.

Marital status, age 15 and older, by sex and race, 1980 and 1994



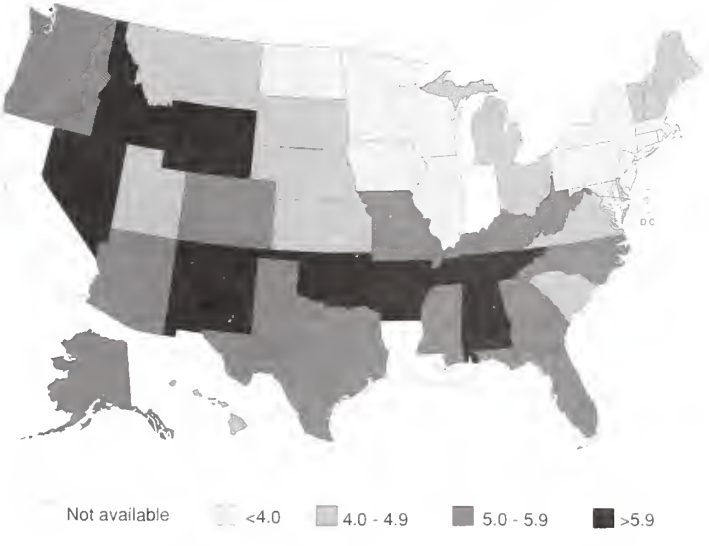
Source: Bennett, C.E., 1995, The Black Population in the United States: March 1994 and 1993, Current Population Reports, Population Characteristics, Series P20-480, U.S. Department of Commerce.

Birth rates per 1,000 population, by States, 1994



Source: U.S. Department of Health and Human Services, National Center for Health Statistics, 1995, Monthly Vital Statistics Report 43(13):11, table 1.

Divorce rates per 1,000 population, by States, 1994



Source: U.S. Department of Health and Human Services, National Center for Health Statistics, 1995, Monthly Vital Statistics Report 43(13):12, table 2.

Recent Legislation Affecting Families

Public Law 104-65 (enacted December 19, 1995)—the Lobbying Disclosure Act of 1995 requires that each person who spends at least 20 percent of his/her time lobbying Members of Congress, their staff members, or executive branch officials must register as a lobbyist with the Clerk of the House and the Secretary of the Senate. Any person who lobbies on behalf of a foreign government must also register. The registration must identify the lobbyist's client, the issue lobbied, and the amount of money spent on the effort.

Public Law 104-70 (enacted December 23, 1995)—amends the Clean Air Act to provide for an optional provision for the reduction of work-related vehicle trips and miles traveled in ozone nonattainment areas designated as severe. Previously, implementation of a trip reduction program was voluntary rather than mandatory. Under the new law, employers must implement trip reduction programs in nonattainment areas. The State containing the nonattainment area can adopt any program it deems appropriate.

Public Law 104-71 (enacted December 23, 1995)—the Sex Crimes Against Children Prevention Act of 1995 increases the penalties for certain sexual crimes against children. This law includes increased penalties for certain conduct involving the sexual exploitation of children, for use of computers in sexual exploitation of children, and for transportation of children with intent to engage in criminal sexual activity. In addition, the law requires the U.S. Sentencing Commission to submit a report to Congress concerning offenses involving child pornography and other sex offenses against children within 180 days.

Public Law 104-72 (enacted December 23, 1995)—authorizes the Director of the U.S. Information Agency to continue to administer an *au pair* program, which operates on a worldwide basis, through fiscal year 1997.

Public Law 104-73 (enacted December 26, 1995)—the Federally Supported Health Centers Assistance Act of 1995 amends the Public Health Service Act to permanently extend and clarify malpractice coverage for health centers. Federally supported health centers and their doctors, employees, officers, and contractors were insured against loss based upon malpractice under the Federal Tort Claims Act through December 31, 1995. Under this law, coverage is extended through December 31, 1998.

Public Law 104-76 (enacted December 28, 1995)—the Housing for Older Persons Act of 1995 amends the Fair Housing Act by modifying the exemption from certain familial status discrimination prohibitions granted to housing for older persons. Under this amendment, a housing facility will be deemed a senior housing facility if 80 percent of its units are occupied by persons 55 years of age or older, without reference to the facilities and services provided. In addition, a person cannot be held personally liable for monetary damages for a violation of this title if the person reasonably relied, in good faith, on the application of the exemption under this subsection relating to housing for older persons; that is, the person has no actual knowledge that the facility or community was not eligible for such exemption, and the facility or community has stated formally in writing that they comply with the requirements for the exemption.

Public Law 104-95 (enacted January 10, 1996)—amends Title IV of the U.S. Code to limit State taxation of certain pension income. The amendment specifies that no State may impose an income tax on any retirement income of an individual who is not a resident or domiciliary of the State.

Public Law 104-104 (enacted February 8, 1996)—the Telecommunications Act of 1996 rewrites the Nation's telecommunications laws, promoting competition and removing some regulations on telephone, cable, and broadcast companies. New regulations open the local telephone monopolies to competition and place restraints on the regional Bell telephone companies as they enter the long-distance and equipment markets now forbidden to them by court order. In addition, new rules shape competition in video services among telephone companies, cable carriers, satellite services, and broadcasters.

Research and Evaluation Activities in USDA

From the Office of Analysis and Evaluation, Food and Consumer Service

The Office of Analysis and Evaluation (OAE), Food and Consumer Service (FCS) has several new projects of interest to the nutrition community.

The Effectiveness of Nutrition Education and Implications for Nutrition Education Policy, Programs, and Research: A Review of Research

A special issue of the *Journal of Nutrition Education* was published in December 1995. The journal synthesizes the research on nutrition education efforts targeted at preschoolers, school age children, adults, pregnant women and caregivers of infants, older adults, and the in-service preparation in nutrition education for professionals and paraprofessionals. Only studies with strong evaluation designs were reviewed to answer these key questions: Does nutrition education work? If so, what are the successful elements across interventions? What are the implications of the findings for nutrition education programs implementation, research, and policy? A detailed matrix of all studies reviewed was provided in the appendix. The studies provide evidence that well-designed, consumer-driven, behaviorally focused nutrition education can change behavior to promote good health. Copies of the issue are available from FCS, OAE, or the *Journal of Nutrition Education*.

Nutrition Education in Schools

The Nutrition Education in Schools study examined the status of nutrition education in U.S. public schools in order to help track current and future initiatives. The National Center for Education Statistics (NCES) conducted the study at the request of FCS. The survey requested information on the status of nutrition education in U.S. public schools, including: (1) topics covered; (2) how schools provide nutrition education in terms of instructional staff, curricula utilized, and integration of nutrition education into the curriculum and the school meals program; and (3) importance and priority of topics. With this information, the Food and Consumer Service can identify gaps that exist in nutrition education and determine where additional efforts might be needed.

Data were collected by means of a self-administered mail survey sent to 1,000 school principals in a nationally representative sample of U.S. public elementary, middle, and high schools. Data collection was completed with a final response rate of 93 percent. A final report is currently undergoing agency clearance.

Characteristics of Food Stamp Households: Summer 1994

Nutritionists who counsel lower income clients should find this report useful, for it provides summary information about the demographic and economic circumstances of food stamp households. On average, 27.3 million people living in 11.0 million households received food stamps in the United States each month in the summer of 1994. Over half of recipients were children and another 7 percent were age 60 or older. The average food stamp household contained 2.5 members.

Twenty-one percent of food stamp households had earnings and 38 percent received Aid for Families With Dependent Children (AFDC) benefits. Other cash assistance received by food stamp households included Supplemental Security Income (23 percent of households), Social Security (18 percent), and State General Assistance benefits (7 percent). Ten percent of households had no income of any kind.

Only 10 percent of food stamp households had incomes above the poverty line, whereas 41 percent were at or below half the poverty line. The typical food stamp household had a gross income of $514 per month and received a monthly benefit of $165. Nearly one-fourth of monthly available funds (cash income plus food stamps) for a typical household comes from food stamps.

Geographic Analysis of Retailer Access

The ability of food stamp participants to obtain a nutritious and healthful diet depends, in part, on their proximity to food stores that carry a full line of food and are authorized to accept food stamps. This report used geographic information systems software to calculate the distance (in terms of miles) between Food Stamp Program participants and stores likely to carry a full line of food (defined as supermarkets plus "large" groceries—those with over $500,000 in annual sales). The report measured distances in 9 sites drawn from over 40 sites used in a

nationally representative sample of food stores authorized to participate in the Food Stamp Program. The sites in this report were not nationally representative but were chosen to represent a range of demographic and income characteristics. They included highly urban, small-city-plus-surrounding-rural, and sparsely populated areas.

In the highly urban sites (inner-city Baltimore; southeast Los Angeles; and Pasadena, CA), over 90 percent of food stamp households lived within a half mile of a supermarket or large grocery. In these highly urban areas, we also examined the presence of supermarket chains ranked in the top 200 nationally. The presence of nationally ranked chains varied from 1 in 4 large stores in Baltimore and Pasadena to 1 in 45 in southeast Los Angeles.

In the small cities studied (Charleston, WV; Las Cruces, NM; and Palmdale, CA), between 75 and 97 percent of food stamp households lived within 2 miles of a supermarket or large grocery. In the rural areas surrounding these small cities, between 34 and 74 percent of food stamp households lived within 2 miles of a supermarket or large grocery. Finally, in the sparsely populated areas (Boone County, WV; Dillon and Marion Counties, SC; and Otero and Lincoln Counties, NM), between 56 and 87 percent of food stamp households resided within 2 miles of a supermarket or large grocery. This was because most of the food stamp population lived in the small towns that contained the majority of such stores.

This report is one in a series of studies on food access. Future reports will explore the quality, variety, and price of food available in stores accessible to food stamp households.

Children's Food Assistance Geomapping Study

FCS awarded a contract to investigate the feasibility of using geomapping as a method of examining the delivery of FCS food assistance program benefits to children in rural areas. The objectives of this study are to: (1) identify and map the areas of the United States where children who are at or below 130 percent and 185 percent of poverty reside; (2) identify and resolve the practical problems associated with use of geomapping to examine food assistance program access to children; and (3) use geomapping to identify and examine variables that affect access of children to the following food assistance programs: (a) School Breakfast Program (SBP); (b) Child and Adult Care Food Program (CACFP), including child care centers, outside-school-hours care centers, and family and group day care homes; (c) Summer Food Service Program (SFSP); and (d) Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

The application of geographic information systems (GIS) technology will be a significant component of this study. Locations of the relevant food assistance programs will be mapped and matched with census data on poverty, transportation, and other relevant variables in order to examine the delivery of benefits to children in rural areas. The project will provide the opportunity to assess the potential contribution that emerging GIS technology can provide in the administration of the programs included in this study. Issues related to using geomapping to examine FCS program access nationwide will also be examined. Findings will be available in mid-1997.

From the Beltsville Human Nutrition Research Center, Agricultural Research Service

CD-ROM Available

The 1994 Continuing Survey of Food Intakes by Individuals (CSFII) and the 1994 Diet and Health Knowledge Survey (DHKS) are national surveys conducted by the Agricultural Research Service of USDA. The CSFII provides information on food and nutrient intakes by 5,589 individuals of all ages, and the DHKS provides information on dietary knowledge and attitudes from 1,879 individuals 20 years and older who participated in the 1994 CSFII.

In the previous issue of *Family Economics and Nutrition Review*, we reported that microdata from the 1994 CSFII could be purchased on magnetic tape from the National Technical Information Service (NTIS). These data, together with those from the 1994 DHKS, are now also available on CD-ROM from NTIS. The cost is $50 for residents of the United States, Canada, and Mexico; the cost is $100 for other addresses.

The data allow users to perform their own statistical analyses. The CD-ROM contains the survey instruments—Screener, Household Questionnaire, Day 1 and Day 2 Intake (24-hour recall) Questionnaires, and the Diet and Health Knowledge Questionnaire. Sampling weights needed for calculating population estimates are included on the CD-ROM, as are technical support files: the Survey Food Coding Data Base (contains descriptions and portion size weights for over 7,500 foods); the Survey Nutrient Data Base (contains values for 10 vitamins, 8 minerals, macronutrients,

total fatty acids, energy, fiber, and alcohol for each food in the Food Coding Data Base); and the Survey Recipe Data Base (contains representative recipes for food mixtures found in the Food Coding Data Base). These technical support files may be downloaded from the CD-ROM as ASCII files or imported into a data base management program. Each data base consists of several separate data files. A document is included that indicates the relationships among the data files and provides the format for each file.

The CD-ROM contains search and retrieval software—the Statistical Export and Tabulation System (SETS)—that allows the user to browse the documentation and data files, as well as to create data subsets. Also, the survey data set is made up of seven different files from which users can extract and manipulate the data using data processing programs such as SAS or SPSS. SAS programs that read the data files into SAS and create SAS data files are provided. These programs may be adapted to read the data into other data files and provide the format for each file.

The CD-ROM can be used on a fully IBM-compatible microcomputer 286 or higher. SETS will operate in a MS-DOS 3.1 or higher environment and Microsoft CD-ROM extensions 2.0 or higher. SETS will not work in Apple MacIntosh or UNIX; however, SETS can run on Apple systems using Soft Windows but not on a network. The data set is on one disk.

To order the CD-ROM, call the National Technical Information Service (NTIS) at (703) 487-4650 with order number PB96-501010.

New Report

A new report, *Nutrition Attitudes and Dietary Status of Main Meal Planners/ Preparers, 1989-91: Results from the 1989-91 Diet and Health Knowledge Survey and the 1989-91 Continuing Survey of Food Intakes by Individuals,* was released in January 1996.

This report contains data on nutrition attitudes and dietary status of individuals identified as main meal planners/preparers in two U.S. Department of Agriculture surveys: the 1989-91 Continuing Survey of Food Intakes by Individuals (CSFII) and the Diet and Health Knowledge Survey (DHKS). These two surveys were designed so that individuals' attitudes and knowledge about healthy eating (DHKS) could be linked with their food choices and nutrient intakes (CSFII).

Data were collected in the 48 conterminous States and the District of Columbia between April 1989 and May 1992. Dietary intake information from the CSFII was collected using a 1-day recall and a 2-day record. The DHKS data were collected about 6 weeks after the CSFII.

Data from 4,346 individuals are presented under six topics: How main meal planners/ preparers rate the adequacy of their own diet, the importance of dietary guidance, relationships between health and diet, dietary beliefs, cooking practices, and factors related to grocery shopping. Supplementary data are included on dietary attitudes and nutrient intakes related to the recommended servings of specified food groups, the perceived safety of specified foods, and the use of nutrition labels. In addition, socio-economic and health-related information was collected. A detailed description of the survey design, additional information on the data collection methodology, and selected 2-year data from the DHKS are included in Appendices.

Copies may be purchased from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161, telephone (703) 487-4650. Specify Accession No. PB96-144472.

Data Sources

Pregnancy Nutrition Surveillance System (PNSS)

Sponsoring agency: U.S. Department of Health and Human Services

Population covered: Low-income pregnant women who participate in public health programs.

Sample size: For 1994, 454,000 records

Geographic distribution: For 1994, 18 States, the District of Columbia, American Samoa, and the Navajo Nation.

Years data collected: Continuously since 1979

Method of data collection: The PNSS is based on data collected from health, nutrition, and food assistance programs for pregnant women, such as the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and prenatal clinics funded by Maternal and Child Health block grants and State monies.

Future surveys planned: Annually

Major variables: Nutrition-related indicators include pre-pregnancy weight and height, iron deficiency, and prenatal weight gain. Maternal behavioral risk factors include smoking status, alcohol consumption, and month of gestation when participation in pre-natal care began. Demographic characteristics include age, ethnic group, education, marital status, and migrant status. Data about infant outcome include date of birth, sex, number of infants born, birthweight, duration of breastfeeding, and infant's age at introduction of formula.

For further information and data:
Centers for Disease Control
and Prevention
National Center for Chronic Disease
Prevention and Health Promotion
Division of Nutrition
4770 Buford Highway, NE
Mailstop K-25
Atlanta, GA 30341
(770) 488-4867

Pediatric Nutrition Surveillance System (PedNSS)

Sponsoring agency: U.S. Department of Health and Human Services

Population covered: Low-income, high-risk infants, children, and adolescents from birth to 18 years of age who are enrolled in clinics served by publicly funded health and nutrition programs.

Sample size: For 1994, 8.1 million records from 6,135 clinics

Geographic distribution: For 1994, 39 States, 6 Indian reservations, Puerto Rico, and the District of Columbia.

Years data collected: Continuously since 1973

Method of data collection: Specific data are collected from the clinic record of each child from each visit to a participating program, such as the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); Head Start; Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) Program; and other programs funded by Maternal and Child Health (MCH) block grants. This individual demographic and health screening information is collected with State- and program-specific coding forms, processed at the State level, and forwarded to the Centers for Disease Control and Prevention for analysis.

Future surveys planned: Annually

Major variables: Anthropometric (birthweight, height, and weight), hematologic (hemoglobin, hematocrit, and erythrocyte protoporphyrin), and breastfeeding patterns. Demographic information (clinic, county, date of birth, data of visit, race/ethnic group, sex, type of program, and type of visit—initial or follow-up) is also included.

For further information and data:
Centers for Disease Control
and Prevention
National Center for Chronic Disease
Prevention and Health Promotion
Division of Nutrition
4770 Buford Highway, NE
Mailstop K-25
Atlanta, GA 30341
(770) 488-4867

Journal Abstracts

The following abstracts are reprinted verbatim as they appear in the cited source.

Białostosky, K. and St. Jeor, S.T. 1996. The 1995 Dietary Guidelines for Americans. ***Nutrition Today*** **31*(1)*:6-11.**

The fourth edition of the Dietary Guidelines is issued jointly by the US Department of Health and Human Services (HHS) and the Department of Agriculture (USDA). Revised every 5 years since 1980, the 1995 edition is the first to be mandated by Congress. The Guidelines are based on established medical and scientific knowledge at the time they are issued and provide nutrition and dietary guidance for the public. Each Federal agency is required to promote these Guidelines in carrying out any Federal food, nutrition, or health program. This paper is based on a presentation made at the Society for Nutrition Education's 1995 annual meeting.

Flegal, K.M., Troiano, R.P., Pamuk, E.R., Kuczmarski, R.J., and Campbell, S.M. 1995. The influence of smoking cessation on the prevalence of overweight in the United States. ***The New England Journal of Medicine*** **333*(18)*:1165-1170.**

Background. The proportion of U.S. adults 35 to 74 years of age who were overweight increased by 9.6 percent for men and 8.0 percent for women between 1978 and 1990. Since the prevalence of smoking declined over the same period, smoking cessation has been suggested as a factor contributing to the increasing prevalence of overweight.

Methods. To estimate the influence of smoking cessation on the increase in the prevalence of overweight, we analyzed data on current and past weight and smoking status for a national sample of 5247 adults 35 years of age or older who participated in the third National Health and Nutrition Examination Survey, conducted from 1988 through 1991. The results were adjusted for age, sociodemographic characteristics, level of physical activity, alcohol consumption, and (for women) parity.

Results. The weight gain over a 10-year period that was associated with the cessation of smoking (i.e., the gain among smokers who quit that was in excess of the gain among continuing smokers) was 4.4 kg for men and 5.0 kg for women. Smokers who had quit within the past 10 years were significantly more likely than respondents who had never smoked to become overweight (odds ratios, 2.4 for men and 2.0 for women). For men, about a quarter (2.3 of 9.6 percentage points) and for women, about a sixth (1.3 of 8.0 percentage points) of the increase in the prevalence of overweight could be attributed to smoking cessation within the past 10 years.

Conclusions. Although its health benefits are undeniable, smoking cessation may nevertheless be associated with a small increase in the prevalence of overweight.

Hernandez, D.J. 1995. Changing demographics: Past and future demands for early childhood programs. ***The Future of Children*** **5*(3)*:145-160.**

This article provides a historical analysis of how demographic changes in the organization of American family life from the mid-1800s to the present have shaped the demand for programs to complement the efforts of families to educate and care for their children. The author asserts that the United States is in the midst of a second child care revolution. The first occurred in the late 1800s, when families left farming to enable fathers to take jobs in urban areas and when compulsory free public schooling was established for children age six and above. The second has developed over the past 55 years as the proportion of children under six living in families with two wage earners or a single working parent has escalated and propelled more and more young children into the early childhood care and education programs discussed throughout this journal issue.

Looking to the future, the author sees indications that the demand for early childhood care and education programs will continue to grow while the needs of the children to be served will become increasingly diverse. To meet these dual pressures, the author argues that public funding for early childhood programs—like funding for public schools—is justified by the value such programs have for the broader society.

Cost of Food at Home

Cost of food at home estimated for food plans at four cost levels, March 1996, U.S. average[1]

Sex–age group	Cost for 1 week				Cost for 1 month			
	Thrifty plan	Low-cost plan	Moderate-cost plan	Liberal plan	Thrifty plan	Low-cost plan	Moderate-cost plan	Liberal plan
FAMILIES								
Family of 2:[2]								
20 - 50 years	$55.10	$69.60	$85.80	$107.10	$238.70	$301.40	$372.10	$464.00
51 years and over	51.90	66.90	82.80	99.10	225.00	290.20	358.60	429.60
Family of 4:								
Couple, 20 - 50 years and children—								
1 - 2 and 3 - 5 years	80.10	100.20	122.50	150.90	347.10	434.00	531.00	653.70
6 - 8 and 9 - 11 years	92.00	117.80	147.00	177.30	398.50	510.40	637.00	768.10
INDIVIDUALS[3]								
Child:								
1 - 2 years	14.40	17.70	20.70	25.10	62.50	76.60	89.70	108.70
3 - 5 years	15.60	19.20	23.80	28.40	67.60	83.40	103.00	123.20
6 - 8 years	19.10	25.50	31.80	37.00	82.90	110.70	137.70	160.40
9 - 11 years	22.80	29.00	37.20	42.90	98.60	125.70	161.00	185.90
Male:								
12 - 14 years	23.60	32.80	40.70	47.90	102.40	142.10	176.30	207.40
15 - 19 years	24.40	33.80	42.10	48.70	105.60	146.30	182.30	211.00
20 - 50 years	26.30	33.70	42.00	51.10	114.00	145.80	182.20	221.20
51 years and over	23.80	32.10	39.60	47.50	102.90	139.30	171.50	205.80
Female:								
12 - 19 years	23.60	28.30	34.40	41.50	102.20	122.80	149.00	180.00
20 - 50 years	23.80	29.60	36.00	46.30	103.00	128.20	156.10	200.60
51 years and over	23.40	28.70	35.70	42.60	101.60	124.50	154.50	184.70

[1]Assumes that food for all meals and snacks is purchased at the store and prepared at home. Estimates for the thrifty food plan were computed from quantities of foods published in *Family Economics Review* 1984(*1*). Estimates for the other plans were computed from quantities of foods published in *Family Economics Review* 1983(*2*). The costs of the food plans are estimated by updating prices paid by households surveyed in 1977–78 in USDA's Nationwide Food Consumption Survey. USDA updates these survey prices using information from the Bureau of Labor Statistics, *CPI Detailed Report*, table 4, to estimate the costs for the food plans.

[2]Ten percent added for family size adjustment. See footnote 3.

[3]The costs given are for individuals in 4-person families. For individuals in other size families, the following adjustments are suggested: 1-person—add 20 percent; 2-person—add 10 percent; 3-person—add 5 percent; 5- or 6-person—subtract 5 percent; 7- or more-person—subtract 10 percent.

Consumer Prices

Consumer Price Index for all urban consumers [1982-84 = 100]

Group	Unadjusted indexes			
	March 1996	February 1996	January 1996	March 1995
All items	155.7	154.9	154.4	151.4
Food	151.6	150.8	151.0	147.4
Food at home	152.5	151.4	151.9	147.6
Food away from home	151.2	150.9	150.6	148.1
Housing	151.7	151.2	150.6	147.4
Shelter	170.1	169.4	168.6	164.5
Renters' costs[1]	180.4	178.8	176.6	174.6
Homeowners' costs[1]	175.0	174.6	174.3	169.8
Household insurance[1]	159.1	158.6	158.0	157.1
Maintenance and repairs	137.5	137.0	136.3	134.2
Maintenance and repair services	143.8	143.0	142.1	138.8
Maintenance and repair commodities	129.0	128.8	128.6	128.2
Fuel and other utilities	125.2	125.0	124.7	122.3
Fuel oil and other household fuel commodities	99.3	97.7	97.6	89.0
Gas (piped) and electricity	118.2	119.1	118.7	117.1
Household furnishings and operation	124.6	124.3	124.1	122.6
Housefurnishings	111.7	111.4	111.4	111.2
Apparel and upkeep	134.8	131.2	130.0	134.4
Apparel commodities	131.6	127.8	126.5	131.3
Men's and boys' apparel	129.1	126.4	124.7	127.2
Women's and girls' apparel	129.9	124.6	123.4	131.5
Infants' and toddlers' apparel	133.3	134.4	131.5	127.1
Footwear	128.1	125.8	123.4	125.9
Apparel services	158.9	158.5	158.2	157.6
Transportation	141.2	140.4	139.9	138.0
Private transportation	138.3	137.5	137.4	135.2
New vehicles	143.6	143.5	143.2	140.7
Used cars	157.3	157.5	157.9	154.8
Motor fuel	101.4	98.2	98.6	97.5
Maintenance and repairs	156.9	156.6	156.2	152.7
Other private transportation	172.5	173.2	172.7	170.2
Public transportation	178.9	177.4	171.6	174.5
Medical care	226.6	226.2	225.2	218.4
Medical care commodities	208.9	208.5	207.7	203.7
Medical care services	230.7	230.3	229.3	221.8
Professional medical services	206.5	206.1	205.0	199.1
Entertainment	158.4	158.3	157.0	152.6
Entertainment commodities	142.7	142.5	141.4	137.3
Entertainment services	177.0	177.0	175.5	170.7
Other goods and services	213.0	212.6	212.0	204.0
Personal care	149.4	149.3	149.1	146.0
Toilet goods and personal care appliances	144.0	144.1	143.7	142.2
Personal care services	155.3	155.2	155.0	150.2
Personal and educational expenses	244.1	243.7	243.0	232.0
School books and supplies	225.2	224.7	223.8	212.6
Personal and educational services	245.7	245.4	244.7	233.6

[1]Indexes on a December 1982 = 100 base.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Order Processing Code:
*** 5141**

Superintendent of Documents Order Form

Charge your order.
It's Easy!
To fax your orders (202) 512-2233

☐ **YES,** enter my subscription as follows:

____ subscriptions to **FAMILY ECONOMICS AND NUTRITION REVIEW (FAMER)** for $8.00 per year ($10.00 foreign).
(**NOTE**: Formerly **FAMILY ECONOMICS REVIEW**)

The total cost of my order is $_____. Price includes regular domestic postage and handling and is subject to change.

_____
(Company or personal name) (Please type or print)

_____
(Additional address/attention line)

_____
(Street address)

_____
(City, State, ZIP Code)

_____
(Daytime phone including area code)

_____
(Purchase Order No.)

For privacy protection, check the box below:

☐ Do not make my name available to other mailers.

Please choose method of payment:

☐ Check payable to the Superintendent of Documents
☐ GPO Deposit Account ☐☐☐☐☐☐☐ ☐
☐ VISA or MasterCard Account
☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
☐☐☐☐ (Credit card expiration date)

Thank you for your order!

_____
(Authorizing Signature)

Mail to: New Orders, Superintendent of Documents
P.O. Box 371954, Pittsburgh, PA 15250-7954